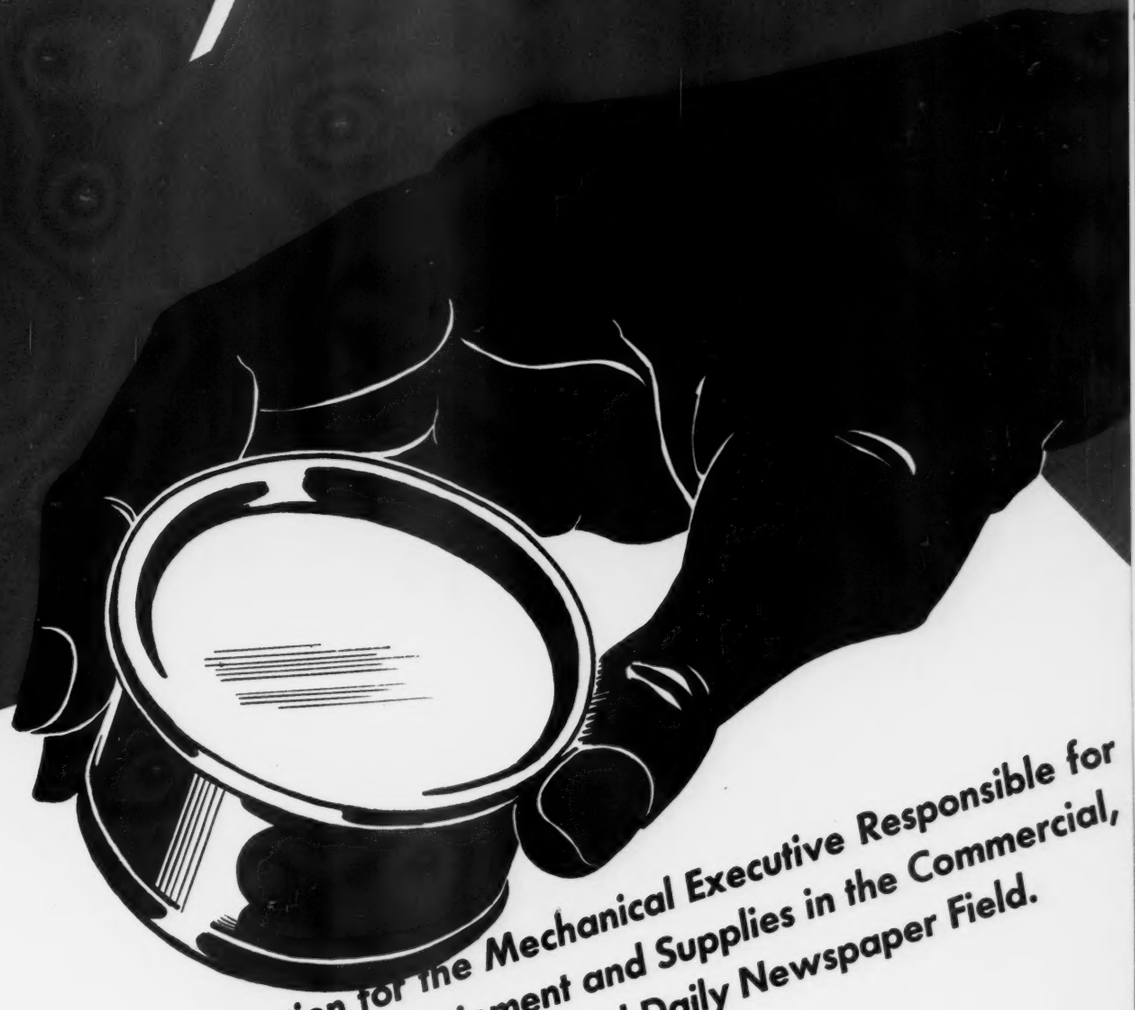
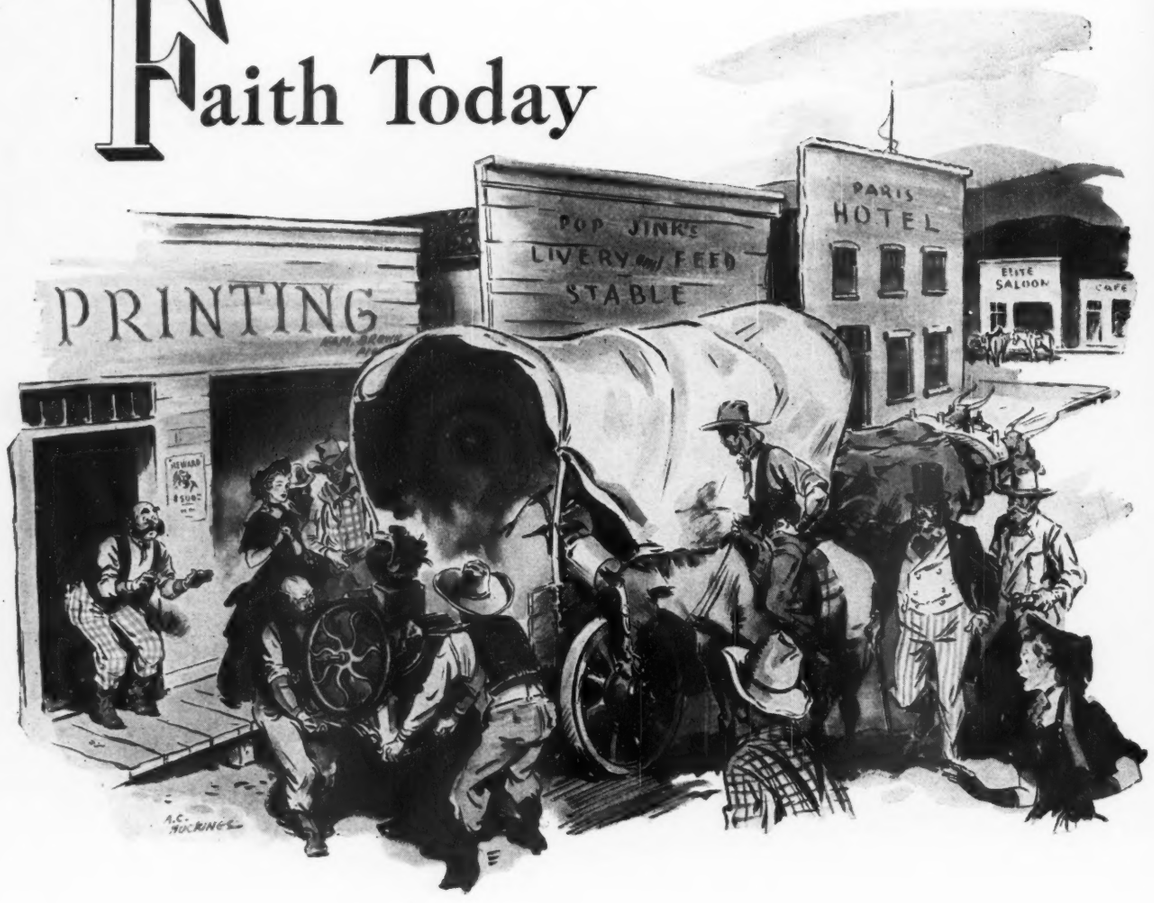
PRINTING EQUIPMENT *Engineer*



A Technical Publication for the Mechanical Executive Responsible for Printing Production, Equipment and Supplies in the Commercial, Magazine, Private Plant and Daily Newspaper Field.

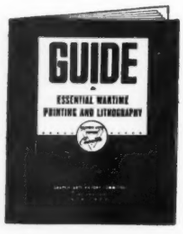
OCTOBER 1943

Faith Today



Who brought the first printing plant into Fort Dodge—or into any other booming frontier town—who gambled his last dollar upon his faith in *printing* as a vitalizing force? It was a *printer*, an idealist, a man of vision. He believed that education would make America the ideal for the world, would protect liberty and stimulate prosperity. He staked his all upon his dream. His shop in the woods or on the prairies became a clearing house of ideas, the mainspring of growth.

The printer's faith in himself, his profession, and his country, triumphed over gruelling hardships in pioneer days. Today, America's Graphic Arts, competent, well-drilled, and endowed with the old printing spirit of fighting faith, is qualified to master even the tougher tasks arising from war needs, and later to cope with the constructive needs of a Nation at peace.



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Page make-up and handling
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Imposition and lock-up of forms
Make-ready on press
Presswork
Folding, gathering, etc.
Handling and cutting stock
Paper stock
Ink used
Findings for binding, etc.
Handling, packing, shipping, etc.

Printers operating Monotypes are in an exceptionally favorable position to co-operate with buyers of printing in a concerted effort to save materials and labor. Those printers who do not operate Monotypes have at their command the resources of hundreds of Monotype-equipped trade composition plants, the owners of which will be glad to help co-operate in any plan which has conservation of our country's resources as its purpose.

Save by Typographic Restyling

LANSTON MONOTYPE MACHINE COMPANY

MONOTYPE BUILDING, TWENTY-FOURTH AT LOCUST STREET, PHILADELPHIA 3, PENNA.

SAVE TO SAVE AMERICA—BUY UNITED STATES WAR BONDS AND STAMPS

Composed in Monotype 20th Century Family and Monotype Stylescript, No. 425

It's so easy to RELAX

• The war news is encouraging. It tempts all of us to take things a bit easier. How wrong this is, no one realizes better than the mechanical executive. » » » For his problem of filling an essential civilian need gets tougher every day. He knows that new pressroom equipment must wait till some while after the hard battles for Europe and Asia are both won. » » » As a result he's taking precious care of what he has. He avoids interruptions to service by a periodic program of inspection which turns up sources of weakness before they cause trouble. » » » And the reading public owes him its gratitude for the continuous appearance of its best source of complete news coverage . . . the daily newspaper.

R. HOE & CO., Inc.

910 E. 138th Street, New York 54, N. Y.

BOSTON • CHICAGO • BIRMINGHAM • SAN FRANCISCO

October 15, 1943

Dear Sir:

It is a pleasure to summarize the Miller Exchange Listing Service as follows:

Q. What is the Miller Exchange Listing Service?

A. A wartime means of facilitating the exchange of Miller Automatic Presses among printing concerns—wherein the Miller Printing Machinery Co. acts as a "clearing house" for those desiring to buy or sell Miller equipment.

Q. Why is this Exchange Service afforded?

A. To help in utilizing existing printing equipment to the fullest extent and without delay, in the maximum production of the nation's essential printing.

Q. Who may utilize the Service?

A. Miller users and others interested in buying or selling Miller equipment.

Q. How is application made for the listing of equipment?

A. Merely by writing to the Miller Printing Machinery Co., Pittsburgh, Pa., and stating what equipment is desired to be purchased or offered for sale.

Q. When should request for listing be made?

A. Immediately after decision is made to buy or sell equipment. Thus, little time as possible will be lost in putting the equipment into practical production.

Q. Where does the Miller Exchange Listing Service apply?

A. Anywhere within the United States and Canada.

Full particulars on the Miller Exchange Listing Service will be given gladly, on request

miller

MILLER PRINTING MACHINERY CO., PITTSBURGH, PA.

AS YOU NEVER DROVE BEFORE!

Many a soldier owes his life to a commander who drove him to the utmost in battle—*never let him slacken for a single fatal instant!* And after the war, many a worker will owe his economic safety to a leader who drove him continuously for higher Pay-Roll allotments for the purchase of War Bonds!

Despite higher taxes and prices, the average worker still has more money than ever before—particularly on the basis of the *family* income. With others in the family earning, too, just let the worker 'figure it out for himself', and he usually will realize that *now* he can put more into War Bonds than he has been doing.

That's why the Treasury Department has set new quotas for the current Pay-Roll Allotment Drive—*quotas running about 50% above former figures.* These quotas are designed to reach the *new* money that's coming into the family income. Coming from millions of new workers . . . from women who never worked before . . . from millions who never before earned anything like what they are getting today!

The current War Bond effort is built around the *family* unit, and the Treasury Department now urges you to organize your War Bond *thinking*—and your War Bond *selling*—on the basis of your employees' *family* incomes. For details, get in touch with your local War Finance Committee which will supply you with all necessary material for the proper presentation of the new plan to your workers through your labor-management committees.

Today about 30,000,000 wage earners, in 175,000 plants, are buying War Bonds at the rate of nearly half a billion dollars a month. Great as this sum is, *it is not enough!* So turn-to today! Get this new *family income plan working!*

This Space Is a Contribution to America's All-Out War Effort By

PRINTING EQUIPMENT ENGINEER

#2005

PRINTING EQUIPMENT *Engineer*

A technical publication for the mechanical executive responsible for printing production, equipment and supplies in the commercial, magazine, private plant and daily newspaper field.

VOL. 67 NO. 1

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- **STANDARD BOOK ON ESTIMATING for PRINTERS —By Fred W. Hoch.** Revised 1941 edition. This book is a primer for students and a reference for printers and estimators. Every printing plant should have a copy. Author explains all operations in commercial printing plant and shows production time allowance for each in hours and decimal hours. Size, 6 in. by 9¼ in., 268 pages, $3.75 per copy, cash with order.

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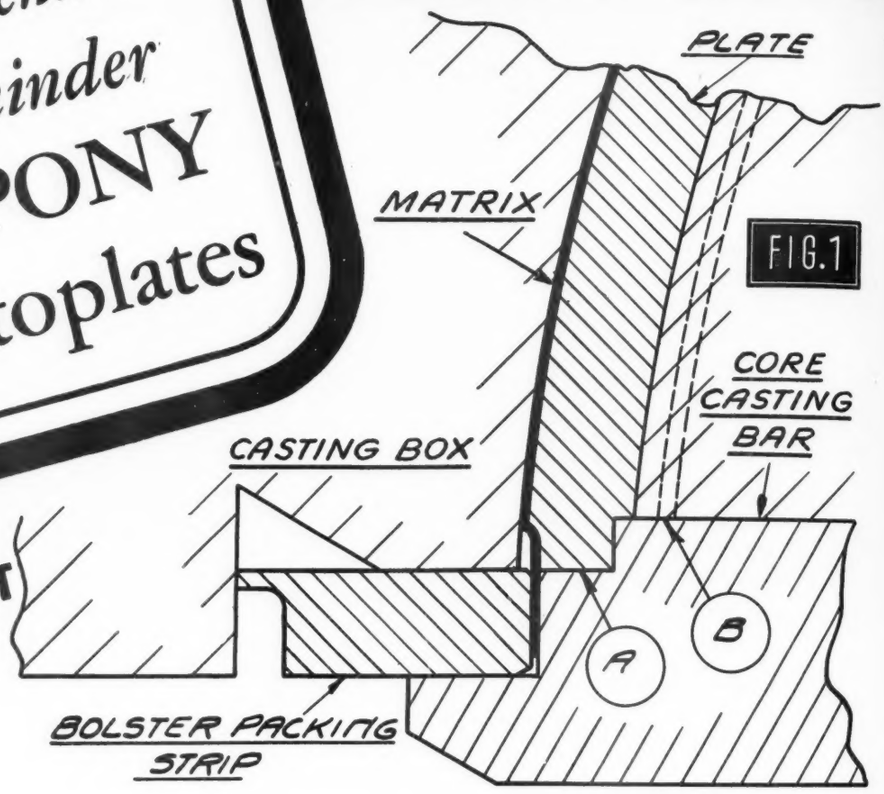
Please Note: All book order must be accompanied by remittance. This is necessary because of narrow handling margin allowed.

PRINTING EQUIPMENT
Engineer
1276 West Third Street
Cleveland 13, Ohio

Maintenance Reminder for PONY Autoplates

FITTING CORE SEGMENT HALF RING

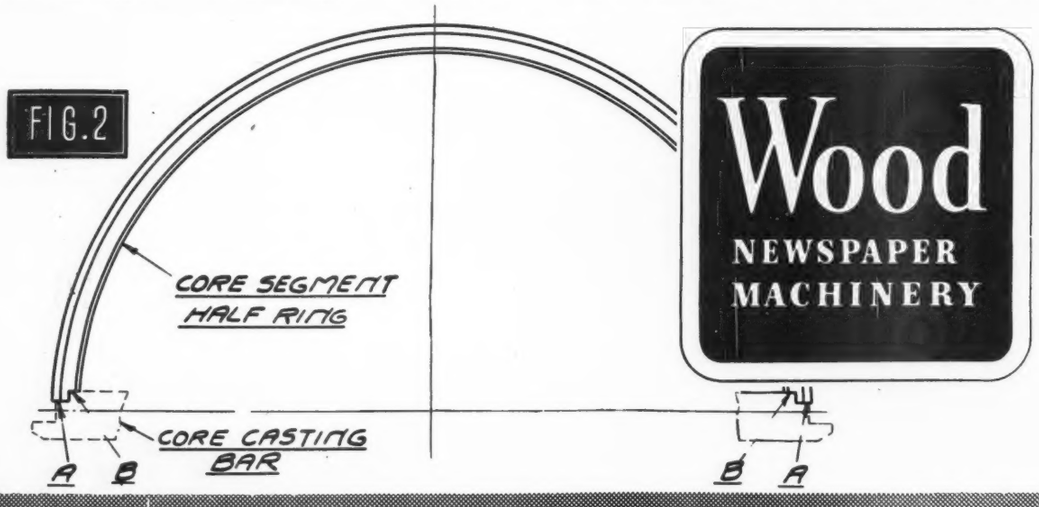


The Core Segment Half Ring, on PONY Autoplates, should be checked regularly, and replaced when worn. Replacement rings (available from stock) are furnished with an extra .025" *on the ends* — to allow for fitting to the core casting bars.

Fig. 1 shows a cross section of the Matrix Lock-up, Fig. 2 shows the half ring itself. In both diagrams, the end surfaces are marked "A" and "B". These ends should be *filed down,* approximately .025", to fit snugly against the core casting bars.

Brochure of the entire series of these Wood War-Time Maintenance suggestions will be mailed on request.

Wood Newspaper Machinery Corp., Plainfield, N. J. New York Office: 501 Fifth Ave., New York 17, N. Y.



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NEWSPAPER
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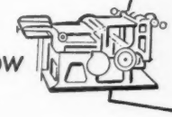
We are inviting inquiries now for delivery of ATF Kelly presses after the war is won. Write or tell us the sizes of presses in which you will be interested.

ATF Kelly... THE PRESS OF TODAY AND TOMORROW



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TYPE FOUNDERS
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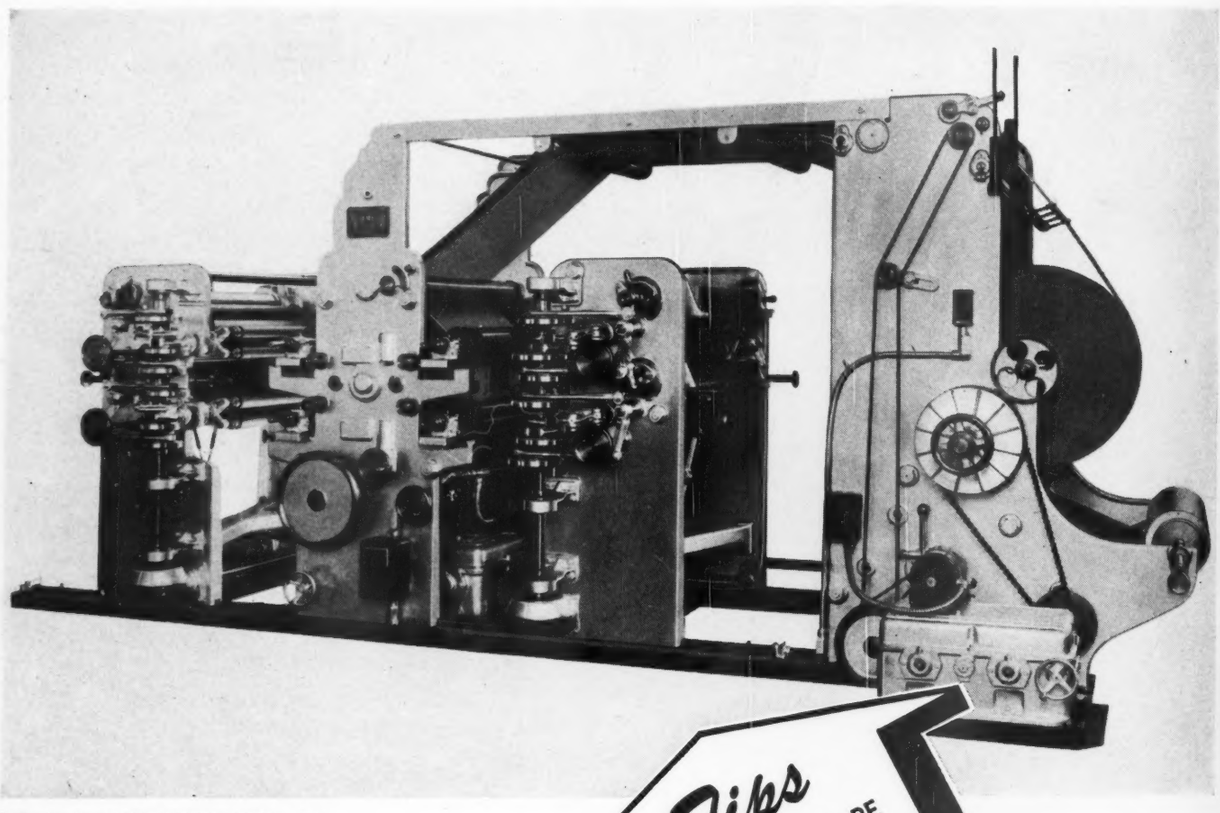
DANGER *of bearing trouble is*
"OUT" WITH SCHMUTZ WEB PRINTERS



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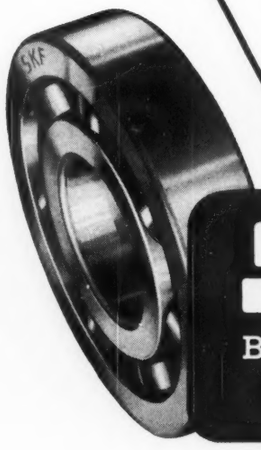
To make present equipment last longer

1. Use clean lubricant recommended by the manufacturer of this machine.
2. Avoid loads and speeds beyond those recommended by the manufacturer.
3. If necessary to remove bearings, keep them properly lubricated. Avoid the intrusion of water and dirt. Apply pressure on the inner race only. Don't hammer outer race.



SKF
BALL AND ROLLER
BEARINGS

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NOW, a single book—indexed for easy reference—can take the place of separate handbooks and bulletins for identifying and ordering most G-E renewal parts needed to keep your equipment in operation. With this book, you'll find it easier to order genuine G-E parts *by catalog number*—saving time all along the line.

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GENERAL ELECTRIC

General Electric Co., Section LL 750-220
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Name.....

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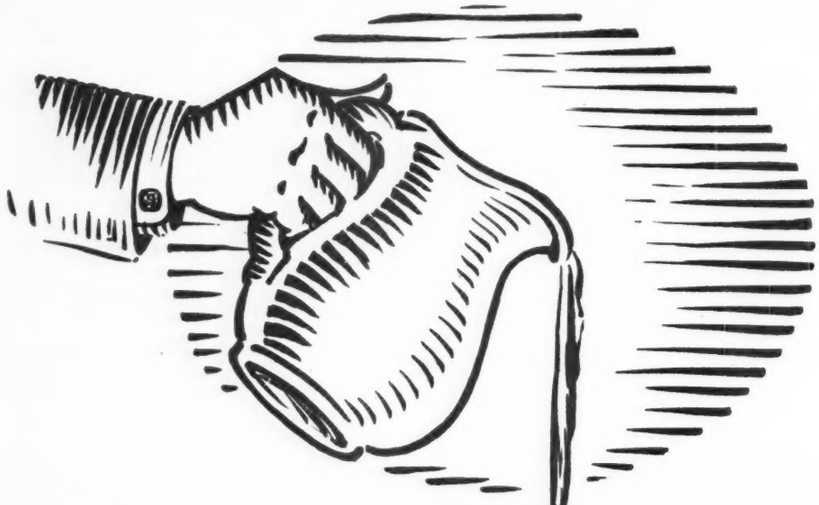

POUR SOME OF IT BACK INTO YOUR NEWSPAPER!!!

BECAUSE most equipment manufacturers are on all-out War production there are very few plant improvements available to the printer and publisher.

But here's one way you can pour back some of your profits and get immediate labor-saving results—Install Black and White contrast matrices on your line casting machines. Reductions in errors as high as one-third have been proven in many plants now using this service.

Black and White Contrast Service is the one big plant improvement that gives you direct benefits. It is a proven, positive way to get more out of your available manpower; more ems out of your line casting machines.

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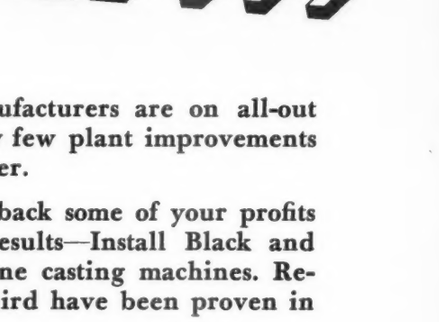


"Fluid Type" produced by special equipment to satisfy any contingency in Minneapolis trade composition plant for letterpress and offset-lith platemakers

By HORACE ANNIS

IT would seem that out of the welter of type faces now available to the letterpress, offset and gravure printer and the trade compositor, enough variety in design and sizes exist to satisfy every particular requirement, no matter for what purpose the type may be used. In this connection, there never will be a permanent moratorium in type design itself. We will continue to have type trends, partly because we tire presently of that which has met the eye for a time and because we agree with designers and manufacturers that perfection in type design has not yet been reached. To which observation we want to add a fervent prayer that perfection will never be achieved.

Type has been called a flexible tool, and such it is. However, progress springs from dissatisfaction with things as they are, and in this article we tell the story of how one man is expanding the flexibility of type and hand-lettering.

The development of photo-mechanical plate-making processes and the increased use of hand-lettered designs in advertising have combined to emphasize the need for greater flexibility in type—not only in the design of letters but also in the ability to better fit the line to the space to be occupied. Increasingly apparent has been the need for what, lacking a better name, we will call "fluid type". The offset-lith platemaker is perhaps more sensitive to the need for greater flexibility than is the letterpress printer because the camera opens up possibilities for satisfying the desire to fit lines into arbitrary spaces in the plate. This is not to say that the letterpress printer and the trade compositor have not felt the need for departing from fixed type sizes. On the contrary, type lines that do not fit into the space assigned, particularly display lines, long have bothered all printers.

Perhaps the trade compositor who works with type for both letterpress and offset-lith reproduction, has felt there is something missing in type flexibility because of the nature of his profession—he works with and for advertising patrons who insist on certain visual effects which the use of standard type cannot give. Then, too, there is always the insistent fellow whose ideas it is difficult to satisfy.

In the past twenty years the trade composition business has been going through an accelerated evolutionary process. The services of the business have been expanded from straight composition to that of complete makeup both for letterpress and offset-lith reproduction. Many a proprietor of a trade composition plant has gone to sleep at the end of a hard day and has dreamed of a type stretcher-squeezer that would enable him to give the customer type that is "just a little wider" or "just a little larger" when his widest or largest type already has been used.

S. Walter Sears, President of The Mono-Trade Company, Minneapolis, Minn., and, incidentally, also president of the International Trade Composition Association.

For a number of trade composition executives the facilities for photo-lettering production are being employed, among them S. Walter Sears, proprietor of the Mono-Trade Company, typographic service and negative-making and offset-lith plate-making plant at 213 South Sixth St., Minneapolis, Minn.

Some time ago, Mr. Sears learned that the Monotype Company was manufacturing a limited number of cameras for photo-lettering, and after investigating the desirability of adding photo-lettering to the services already rendered to lithographers and offset printers, placed an order for the equipment a year or so ago. Since then he has developed use of the equipment among Minneapolis advertisers, printers, lithographers and offset-lith printers.

The Equipment

The equipment for operating the Monotype Photo-Lettering System consists of a 10 ft. camera with 13 in. lens, ground glass, four 400 w. light bulbs (1600 w.) with reflectors to illuminate the copyboard, and two cylindrical lenses, letter-cards and other accessories. The sizes of these cylindrical lenses are 6 in. by 16 in. and 8 in. by 18 in. The darkroom end of the camera has a holder for both film negatives and bromide papers, cylindrical lens carriage, bulb for operating the shutter, operating controls and focusing scale, etc. The copyboard end of the camera has a glass-covered copyboard of size sufficiently large to hold a full newspaper page; a slide for holding a letter-card composing stick, cylindrical lens carriage, the lamps, and a darkroom vacuum printing frame.

What Can Be Done with Photo-Lettering Camera

For explanatory purposes, the utility of the Monotype Photo-Lettering Camera may be divided into five photo-mechanical classifications:

(1) It may be used to make negatives for producing zinc line engravings or for

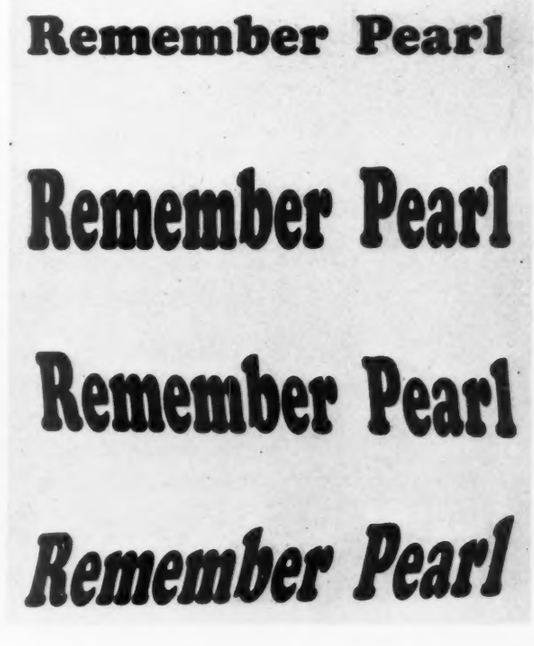


Fig. 1.—Here are shown in miniature four lines of type reproduced from the top specimen line of 30 pt. Cooper Black, 24 pica original measure, which was set in The Mono-Trade Company plant. By adjusting a cylindrical lens (shown in Fig. 3) on a Monotype Photo-Lettering Camera, the various effects from the one type proof have been obtained in the plant of the Mono-Trade Co., 213 So. Sixth St., Minneapolis, Minn. This company does trade composition and makeup and also maesk negatives for use by lithographers, offset printers, photo-engravers, etc., and offset-lith plates for the trade. While retaining the original pica width, the line has been transformed into 54 pt. Condensed, Back Slant and (at the bottom) Italic Style type.

Many New Faces put Punch in
Many New Faces put Punch in
Certificate of Membership
Certificate of Membership
VICTORY CAN ONLY BE ASSURED BY 100
VICTORY CAN ONLY BE ASSURED BY 100
ANSWERING THE CALL
ANSWERING THE CALL
Semi-Annual Sale
Semi-Annual Sale

Fig. 2.—Some further effects obtained with type reproduction proofs on the Monotype Photo - Lettering Camera in plant of The Mono - Trade Company, Minneapolis.

These lines were photographed from reproduction proofs—not from photo-lettering cards, which is a part of the system. The top line of each pair represents the normal setting—the lower line is the reproportioned effect secured by the camera.

These camera reproductions may be in considerable point size range (smaller or larger) in most any width within the limitations of the camera lens system itself. Thus it will seem that without composing equipment or foundry type, the photo-lettering system can be utilized to reproduce photo-lettered lines in variety from the letter-cards within the limitations of the system.

(2) Negatives as described above may also be obtained from reproduction proofs—the proofs having been taken from lines of type set up from any type font in the plant. (See Fig. 3.)

(3) Reproportioning without distortion of an entire block of type matter in dimension may also be performed. For instance, to illustrate, an advertisement composed 18 picas by 24 picas, may be reproportioned by reducing it one-third in width yet at the same time the original depth may be held constant; or the width may be retained and the height increased or diminished. Circular designs may be converted to ovals; squares to oblongs, etc.

(4) The camera can be used as a straight copying camera, to make blow-ups and reductions, produce "perspectives," for photo-prints, etc.—in fact, any purpose for which cameras are ordinarily used—and the negatives so obtained can be used to make either line engravings or offset press plates.

(5) In addition to the effects which

use in making offset press plates, from letter-cards assembled in sequence and properly fitted and spaced to make words. These letter-cards, 4 inches wide and 2½ inches in depth, are photo-prints of letters of the alphabet, figures and points, carefully aligned, with the characters approximately 60 point in size located at the extreme left edge of the card. The cards are assembled or "set" into words in a special composing stick (see illustration) and photographed direct. The letter-cards are made up in standard 10-A fonts and for convenience in storing and composition are placed in a card cabinet, one font to each drawer. Only one size of letter-cards is required of each design to produce all sizes from 6 to 240 pt., and to be converted at will into normal, condensed, extended, italic, back slant, inline, outline, shaded, Ben Day backgrounds, or other styles to suit.

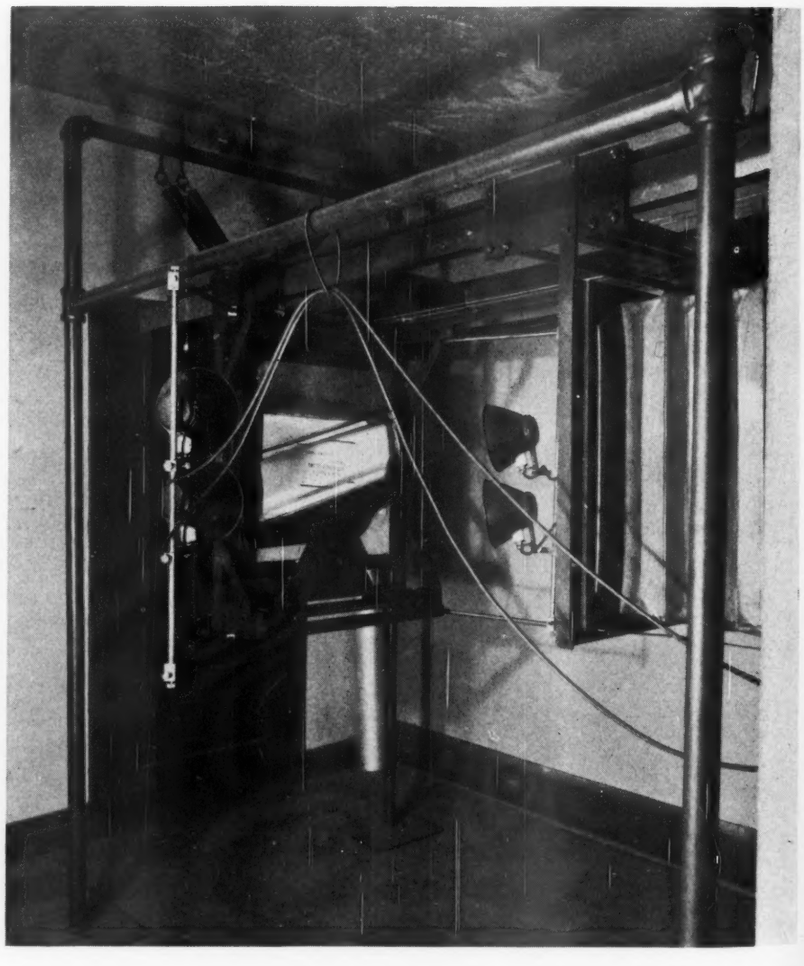


Fig. 3.—Here is shown copyboard view of the Monotype Photo-Lettering Darkroom Camera in plant of The Mono-Trade Co., Minneapolis, Minn. Partly extended camera bellows projecting from the darkroom wall may be seen at the right. Manipulation of the camera, focusing and the like, is done by means of controls within the dark-room after the operator has placed his copy in the glass-covered copyboard. Four lamps, 400 w. each, illuminate the copyboard. A cylindrical lens which is used for obtaining italic or back-slant effects can be seen mounted in front of the copyboard. The lens is rotated through a sector of a circle (clockwise or counter clockwise) to obtain italic or backslant effects in the negative. To explain the shape of this lens to the reader, it might be said that it is a "peripheral segment" of a cylinder—a piece of precisely ground and polished curved optical glass.

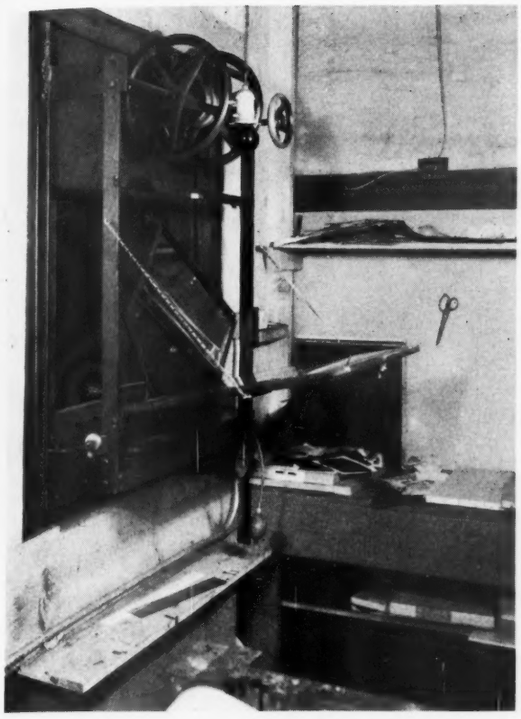


Fig. 4.—Darkroom view of Monotype Photo-Lettering Camera in plant of the Mono-Trade Co., Minneapolis, Minn. The controls may be seen at the top of the picture. A second cylindrical lens (tilted at an angle) is shown. The ground focusing glass has been lowered to show the cylindrical lens to better advantage. This lens is used for obtaining dimensional control in instances where the height of type is to be increased or decreased without changing the overall width of the line.

may be secured with the Photo-Lettering Camera as enumerated above, reverse shadow backgrounds and various other shadow effects may be provided for type lines through the use of dual negatives, and Ben Day screens.

Camera Operations

From alphabet letter-cards each bearing a letter character, a line of characters is set up in the special composing stick, or you may work from a glossy reproduction proof taken from a line of type set in the plant; but from there on the photographic process is the same.

The next step is to place the line set up from the letter-cards, or the reproduction proof, in a slide on the copyboard in front of the camera. Then the cylindrical lens is placed on a carriage about 3 in. from the copyboard, between copyboard and camera. You turn on the four 400 w. lights to illuminate the copyboard. You step into the darkroom back of the camera. Here are the ground glass, the bulbs for operating the camera shutter, the controls for operating the cylindrical lens, and the focusing scale.

Now, standing behind the camera in the darkroom, you have in the ground glass an image of the copy. Let us say the copy is 24 pt. regular or normal style. The customer wants an italic of 20 pt. You focus the lens until the image on the ground glass is 20 pt. size, then you take the cylindrical lens control, tilt the lens counter-clockwise and there is your italic 20 pt. as ordered, ready to photograph.

Just then the telephone rings. The customer asks if you could make the type a little taller. The answer is "yes". You walk back to the camera and move the lens a little farther away from the copy. Instead of being 20 pt., the image has become just a little over that, perhaps no standard size, but "just a little taller", as the customer visualized it.

Nothing more to worry about, so you squeeze the camera bulb and make the exposure, develop the negative and make a zinc or copper line plate for letterpress work or use the negative in making an offset press plate.

Revised Operations

Early next morning the customer gives you a ring. He has decided that the type is all right in size, but back slant would really give his ad a smarter appearance. Can you do anything about it? You can.

You put the original copy back in the copy-holder, move the cylindrical lens clockwise and the result is a snappy back slant—just as the customer ordered. You photograph, develop the negative as before, put the zinc line plate in the type form or pass the negative to the offset plate-making department in your own or another plant, thence into a magazine, catalog, direct mail piece—or what have you.

Let's suppose the job was intended to run as a 24½ picas by 10 in. ad in a magazine. It runs that way this week, but for next week the customer decides it will have to be cut down to 18 picas by 10 in. What's to be done about that? You simply pull a proof of the ad plate and reduce photographically to the desired size. The type remains the same height and the ad remains 10 in. deep. The only change you can see is that the type has become more condensed but without distortion.

Most of Mr. Sears' customers for this type of work are advertising agencies, their artists who wish to reproportion lettering or ads, commercial artists who wish to secure startling effects with lettering of their own design, lithographers and offset printers. They give Sears the copy and from there on he'll make it appear just like requested. What they give him may not even be copy—it may be only an idea. If it's just an idea, his trade composition plant will bring it into being and, if they wish, the plant will carry it on from composition to the finished offset plate in that department of his plant.

In doing work with this equipment apart from his other activities Mr. Sears has designated it "Mono-Flex Service". It is not a separate division of his plant—just an added service which acts as a feeder for his platemaking and trade composition departments.

In many cases existing copy can be changed to meet new requirements. It is a time-saver too, because it takes no longer than it would take you to pose and photograph Bill with that big fish.

Enlargement-Reproportioning Job Limitations

There are limitations in the size of work which can be handled by Mono-Flex in the ordinary way. In the case of enlargement-reproportioning jobs, copy cannot be over 14 in. wide, since the cylindrical lens, as stated before, is about 6 in. by 18 in., or in the case of the larger lens, 24 in., but in reductions copy may be 17 in. wide. When Mr. Sears encounters copy that is too large, he does a photographic reduction to get the proper size copy from which to work.

How Effects Are Secured

Perhaps you are one of those persons who are not satisfied until they know exactly how the magician pulls the rabbit out of the hat. You will then want to know how this system works in terms of

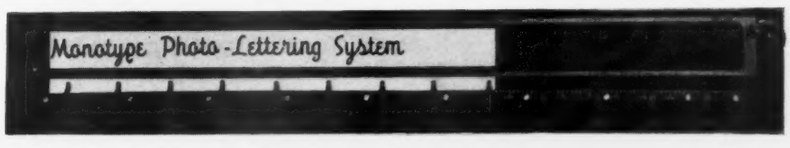


Fig. 5.—View of the composing stick in which the letter cards are composed. This is a 160 pica stick—the scale below the cards being graduated in nonpareil or 6 pt. divisions. Letters on the cards can be spaced to give the desired fitting. The numerous spring clamps hold the letter cards down evenly. When a line has been composed from the cards with the proper characters, the stick is placed in the copyboard of the camera (Fig. 2) for making a negative. Each of the cards measures 2½ in. by 4 in. The letter character in 60 pt. size is printed at the left side of the card slightly above center. The cards may be arranged to permit of any degree of letter-spacing and can be so placed in relation to each other as to permit of overhang of serifs and tails of letters, letters can overlap, cut-under or what have you.

light transmission, refraction and reflection.

Light from the four 400 w. bulbs is projected by the lamp reflectors to the copy on the copyboard and is there reflected through the cylindrical lens intersposed between the camera and copyboard. When the cylindrical lens is tilted at the proper angle, it bends the rays and produces a distortion from a vertical to a slant (back slant or italic) and this image is photographed. Movement of the cylindrical lens backward or forward makes the image either taller or shorter as desired. Precise controls in the darkroom maintain the image at the desired width. Where reductions are extreme, both cylindrical lenses are used to maintain proportions, the smaller one nearest the copy, the larger maintaining proper width.

This new art of the photo-mechanical production of display type matter is at present employed by several firms. Additional equipment, however, will not be available until after the war.

The Lanston Monotype Machine Company, which produces the Monotype Photo-Lettering System equipment in use by the Mono-Trade Company of Minneapolis, has installed similar equipment in four other plants: One of these is a photo-engraving plant in Philadelphia, which uses it to produce display lines and combination plates containing lettering and type lines; for making reverse plates and "perspectives," and for general photographic purposes. Another plant at Detroit specializes in the production of hand-lettered display lines which are photographed to proper size with the photo-lettering camera; trade marks, emblems, title pages, covers and other classes of hand work are brought to proper size with the same system. A typographic service plant at Pittsburgh and one in St. Louis use Monotype Photo-Lettering to produce work similar to Sears.

Fig. 6.—Illustration at the left represents the original photograph taken of a model for a woman's store in Minneapolis. For advertising purposes, the figure was reproportioned in the Sears plant by means of Monotype Photo-lettering Camera to present "slim" effect but without changing height.

Northwest Conference

of newspaper mechanical executives successful in every respect—Leon A. Link after-dinner speaker—Production and materials problem discussion helpful

MORE than 200 newspaper mechanical executives from twelve states gathered at Hotel Raddison, Minneapolis, Minn., on August 21 and 22 for the second annual meeting of the Northwest Newspaper Mechanical Conference. In addition to the immediate northwest states, there were in attendance executives from Ohio, Indiana, Iowa, Michigan, Montana and Illinois.

Devoted to wartime problems, the conference attracted not only newspaper mechanical executives, but foremen from commercial plants and manufacturer and supplier representatives as well.

Saturday, August 21 was devoted to registration and an informal get-together in the evening. The second day, Sunday, August 22, was devoted strictly to business and technical matters.

Among the more prominent men present and who took part in the speaking program, were Leon A. Link, Newspaper Specialist, of WPB's Printing and Publishing Division; F. M. Rarig, jr., Eighth Region director of WMC, and Fred Hudson of the Newspaper Engineering Dept., International Printing Pressmen and Assistants' Union, Pressmen's Home, Tenn.

Officers for 1943-44

Before adjournment, the conference elected the following new officers for the 1943-44 fiscal year period:

President—Al Rosene, Mechanical Superintendent, St. Paul *Dispatch* and *Pioneer Press*.

First Vice President—Joseph Hick, Chief Machinist, St. Cloud (Minn.) *Times*.

Second Vice President—W. C. Brown, Mechanical Superintendent, Minneapolis (Minn.) *Star-Journal*.

Secretary-Treasurer—Vernon G. Eck, Instructor, Dunwoody Industrial Institute, Minneapolis.

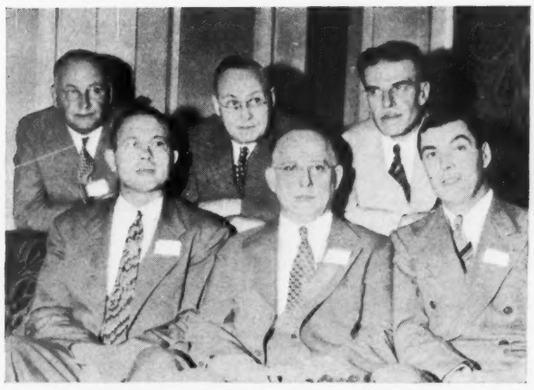
Clinics Start Off Meeting

THE entire assemblage sat in on the start of the Composing Room Clinic at which Walter W. Morey of Teletypesetter Corporation was the principal speaker. Mr. Morey traced development of the Teletypesetter from its inception and expressed the opinion that it is going to occupy a prominent place in newspaper production in the future, especially in the case of chain newspapers. Approximately 200 units are now in operation.

Composing Room Clinic

MECHANICAL Superintendent Al Rosene of the St. Paul *Dispatch* and *Pioneer Press*, was chairman of the Composing Room Clinic. He was assisted by Cecil Mack, Mechanical Superintendent of the Duluth *Herald*; Guy Tizard, General Foreman of the Billings (Mont.) *Gazette*; Bob Lee, Composing Room Superintendent of the St. Paul *Dispatch* and *Pioneer Press*; Art Poggemiller, Composing Room Superintendent of the *Wisconsin State Journal* (Madison, Wis.); and Fred Curle, Composing Room Superintendent of the Minneapolis (Minn.) *Star Journal*.

Most of the discussion at the composing room clinic was devoted to mechanical conservation ideas to save white space in the paper. Folio lines have been



Leaders in arranging and conducting the Northwest Newspaper Mechanical Conference at Minneapolis August 21-22 were (left to right), front row: Al Rosene, Mechanical Superintendent, St. Paul *Dispatch-Pioneer Press*, Chairman of the Composing Room Clinic; V. G. Eck, Instructor of Machine Composition, Dunwoody Industrial Institute, Minneapolis; Joseph Hick, Chief Machinist, St. Cloud (Minn.) *Times*, acting chairman of the Line-casting Machine Clinic. Back row (left to right): W. C. Brown, Mechanical Superintendent, Minneapolis *Star-Journal;* George Curle, Chief Machinist, Minneapolis *Daily Times*, and D. D. Curriden, Engraving Superintendent, Minneapolis *Star-Journal*.

cut from 8 to 3 cols.; heads have been reduced from 18 pt. to 12 pt. in some cases; sports and radio pages, in one instance, have been reduced to effect a 160 in. saving in white space and indented matter has been eliminated.

Ad routing systems were discussed as were ad markup systems. One executive asserted advertisers usually use only 20% of the proofs furnished. It was his idea that the matter of furnishing fewer proofs to advertisers rests in selling the idea to him.

Machinists' Clinic

JOE HICK, Chief Machinist of the St. Cloud (Minn.) *Times*, was acting chairman of the Machinists' Clinic in the absence of Joseph J. Cory who was hospitalized.

One question was related to the care of oilless bearings on newer machines. The answer is that these bearings should be immersed in oil several times a year for a period of 1 hr. Light oil or dry graphite were recommended for lubrication of the first elevator slide.

On a machine metal pot fitted with a thermostat having a mercury tube coil, someone wanted to know why the thermostat permits a rise in metal temperature after a short period of operation when the thermostat has been adjusted for the desired degree of heat. The answer to this is that the mercury tube coil is binding on its holding bracket. To relieve the condition, the tube should be loosened manually.

An annoying mechanical trouble was presented for solution. The question was: "With all distributor box parts in good condition and all adjustments properly made, what would cause the lift to raise a matrix but half way?" It seems that if the distributor shifter slide works sluggishly in its track and if the shifter buffer face is gummy, this trouble will be experienced.[1]

[1] Alternative causes for this trouble: (1) Rounded lifting seat of the lift; (2) Failure of lift to descend fully to its condition of lowest stroke; (3) occasional matrix with rounded edges where the lift contacts the lugs; (4) weak tension of an old lift lever spring.

Someone wanted to know why it has been recommended that the pot lever eyebolt be disconnected and then test the forward thrust of the mold disk when the mold cam lever roller is opposite the second instead of the first hardened steel shoe in the mold slide cam. Preference for using the second shoe is due to the fact that when the roller is bearing against it, the conditions obtaining at the time of the cast are obtained, but this condition cannot be determined with accuracy unless the pot lever eyebolt and the pot pump plunger rod pin are disconnected. The recommended slack or tolerance between the mold face and the matrix line is 0.004 in. in locked up position of the slide. In aligning the matrix line facewise, under momentary pressure of the first shoe in the cam, there is a little more forward pressure of the mold against the matrices which is slacked off during the operations of justifying spacebands in the line.

Engraver's Clinic

ANDREW IRBER presided as chairman. Assisting on the platform were W. W. Warfel of Chemco Photoproducts; E. G. Carlson of Harold M. Pitman Co.; C. E. Purkis of Imperial Type Metal Co., and Ira Hoffman. Dominating the discussion were ways and means for best handling technique of the new 18 and 21 ga. zinc. A few of the highlights brought out in the discussion are as follows: In burning-in the powder, it is necessary to lower the gas flame on the stove from that customarily used when handling 16 ga. zinc, using care to obtain a slow and even burning-in to prevent hot spots in the plate. It was generally agreed that the thin gauge metal can be etched as successfully as 16 ga. if the engraver is careful. It was deemed impractical to attach backing board after the plate has been trimmed to size. Some extra time over that required for 16 ga. zinc is required to produce cuts from thin gauge metal.

There was some discussion on the handling of cold top enamel under various conditions. Essential is careful cleaning of zinc before coating with enamel. Several cleaning compounds are as follows: (1) 1% ammonia and whiting; (2) 1% ammonia and pumice; (3) 1 oz. lye to 1 gal. water, pumice optional; (4) 2 oz. tri-sodium phosphate, 1 gal. water, pumice optional. It was brought out that extreme heat during the burning-in operations will cause scum. Some engravers have eliminated scumming by pre-etching with a solution of ammonia and ammonium bichromate.

Pressroom Clinic

CO-CHAIRMEN of the Pressroom Clinic were Ed O'Neill of the Minneapolis *Star-Journal* and George Anderson of the Minneapolis *Daily Times*. Fred Hudson, Director of the Newspaper Engineering Dept., International Printing Pressmen and Assistants' Union, Pressmen's Home, Tenn., was present to assist in the discussion.

One of the interesting discussions was that related to more accurate impression control in rolling stereotype mats. Henry Messina of Burgess Cellulose Co. and several stereotype executives mentioned that molding pressures can be predetermined on direct pressure machines because the machines are supplied with pressure control means and indicating gauges. None of the matrix rolling machines carry gauges for this purpose. While most stereotypers through judg-

When newspaper mechanical executives get together, they give each other a lift. Left, Al Rosene, Mechanical Superintendent, St. Paul *Dispatch - Pioneer Press*, lights a cigar for Val Wells, Assistant Mechanical Superintendent, Des Moines *Register Tribune*, while W. C. Brown, Mechanical Superintendent, Minneapolis *Star-Journal*, center, looks on with approval at the Northwest Newspaper Mechanical Conference, Minneapolis, August 21-22.

ment can determine proper molding depth in mats, yet it seemed that several stereotypers thought that if the manufacturers of rollers would develop means for predetermining molding pressures, better stereotype plates could be secured. In support of their contention, for example, they pointed out that on an open page less molding pressure is required than for a solid page of type matter. If rollers could be equipped with pressure indicating gauges, proper molding depth would be secured thus eliminating shallow molds and the crushing of type caused by excess molding pressure.

C. W. Ginsberg of R. Hoe & Company was asked to discuss molding pressure. He stated that his company now is working on a molding pressure control and indicator—the dial gauge of which will indicate depth similar to those supplied on direct pressure molding machines.

When asked for an opinion on the setting of printing press impression, Mr. Ginsberg stated that the correct adjustment is dependent upon the press and the thickness of the stereotype plate. Since impression is gauged from iron to iron, naturally the amount of packing to be applied to the blanket cylinder would vary on different presses. He intimated that after the war his company will have perfected an electronic device, through the use of which guesswork will be taken out of the setting on impression.

The use of different stereotype molding combinations came up. Cork and fibre board or cork and steel board were favored by the majority. A number of stereotyping executives who use a creeper on top of the mat claimed to get as good results. Users of the creeper claimed there is less mat slippage which enables them to gain more shrinkage. Conditions in the individual stereotype department, it was agreed, govern the selection and use of a molding combination. Consequently, it was not advisable for the conference to go on record as recommending the use of any one molding combination.

Someone had placed a question in the question box. It read as follows: "If you had your choice of a vacuum-back casting box or a Stahi former, which would you prefer if your choice was limited to one?"

It was brought out in the discussion that the important thing is to get the best mold and plate possible. Both the vacuum-back casting box and the Stahi are instrumental in producing better plates. No one, however, ventured expressed his preference as to which he would take if he could have only one.

The first and second impression cylinders should be packed alike, was the answer given to the question: "What packing difference, if any, should there be between the first and second impression cylinders?"

A majority of the pressmen participating in the discussion favored setting ½ in. flat on 6 in. rollers and a little more on the 7 in. and the 8 in. rollers. Form rollers, according to some pressroom executives, should be set heavier to the ink drum than the plate to prevent skidding of the rollers.

Sheet Copper Electro-Plated On Plate Glass Has Mirror Finish and Can Be Photo-engraved

A TIMELY and ingenious by-product of an electrotype foundry has been developed by George Crocker and Electro Foundry Foreman George Priller in the foundry of Kable Brothers Company, Mt. Morris, Ill. The process consists of electro-plating copper on a polished plate glass surface. The copper sheet stock thus secured may be used for making solid tint blocks and for straight halftone cuts by the photo-engraving process. The smooth and lustrous surface of the plate glass is reproduced on the copper deposit.

Superintendent Harold Ross, of Kable Brothers Co., outlined the process as follows: A section of plate glass is mounted on a regular electrotype case. The plate glass is given an electrically-conductive coating by means of a silver spray application. The glass is then rinsed and is suspended in the copper electroplating solution. The plating process is allowed to continue until the desired thickness of copper deposit has been obtained. It is usually troublesome and relatively expensive operation for the electrotyper to prepare solid tint material.

All electrotypers familiar with the silver spray method know that molten backing metal will adhere to the shell face when it has not been insulated with graphite. This may occur at the time of filling in the shell if the molten backing metal flows over the edges of and underneath the shell. The silver film acts as a solder when the backing metal comes into contact with the shell face. To overcome this difficulty, an iron frame was devised in the Kable foundry. The frame fits over the shell in the pouring pan to prevent any of the backing metal flowing beyond the confines of the frame.

The solid tints thus prepared may be used by the photo-engraver for making straight halftones.

With reference to the qualities of this material, it is obvious that expensive polishing operations are not necessary. The copper should be hard and long wearing. Being actually an electro-shell, it should wear on the press like an electrotype under comparable conditions. Since the sheet metal thus prepared is electro-deposited, the crystals are aligned at right angles to the printing face instead of being parallel to the printing face as is the case with rolled copper. Due to this orientation of the crystals, it should be possible for the photo-engraver to etch more cleanly and to a greater depth because of the purity of the deposited copper. The plate stock thus secured can be backed up to 16 ga. or to 11 pt. thickness.

If a nickel face is desired, best results will be obtained if nickel is first deposited on the plate glass, then sprayed with silver, followed by copper deposition. The nickel may be plated on the face of the electroplated sheet after it has been stripped from the glass. A nickel face produced in this fashion will not have as high a lustre, or finish, as when the nickel is first deposited against the plate glass.

W. C. Brown, Mechanical Superintendent of the Minneapolis *Star-Journal*, pointed out during the discussion on newsprint conservation pointed out that when mechanical executives take their suggestions to management are bound to run into the desire of the publisher and the editor to preserve the "old friend" appearance of the paper, since they are looking at the problem from the readers' viewpoint rather than that of the mechanical viewpoint. However, said Mr. Brown, some space in the pages can be saved which, of course, will mean newsprint saving and that in many instances management and editorial executives won't notice the difference unless the conservation measures in the pages are pointed out to them.

Assistant Mechanical Superintendent Val Wells of the Des Moines (Ia.) *Register* and *Tribune*, said that the adding of two lines or more to the page length of the paper is an effective conservation measure if the mechanical departments will work to closer tolerances. "This doesn't seem like much," said he, "but it is the little things that count. The addition of two lines is quite an item when multiplied over a number of pages."

General Assembly

F. M. RARIG, Jr., Regional Director of the Eighth Region, War Manpower Commission, gave an interesting talk on the purpose of WMC, upon conclusion of the clinics. He described mobilization, recruitment, training and replacement of manpower. He said the Commission does not have anything to do with wages and disputes but the Board is very much concerned with the allocation of manpower.

The speaker explained the assistance which the U. S. Employment service has given and is in a position to give to industry to provide training and upgrading. Training within industry has also been a powerful factor in keeping up manpower in essential industries, he said.

Mr. Rarig noted that there has been a tendency of late for some workers to leave essential industries and return to their old jobs in non-essential industry because of growing optimism inspired by Allied military successes. Such persons have, he said, apparently decided to get back into their old jobs so they can have them when the war ends.

(Continued on Page 47)

Pins prevent center plate of 3-piece truck slipping on press cylinder

By FRED CHEVALIER*

*Stereotype Superintendent, Racine (Wis.) *Journal-Times*.

I HAVE not had a center plate on a three-piece truck slip out of line during a press run in the last two years, thanks to a drilling fixture the cost of which was only the time it took to make.

About four years ago, when the Racine (Wis.) *Journal-Times* got its new 24 page unit tubular Duplex press, we experienced difficulty in keeping the center plate on a three-piece truck from slipping during a run. We tried several hand methods to solve the problem without success.

Two years ago we hit on the idea that if we were to make a drilling fixture, we could use it to drill holes in the abutting ends of each of the plates to hold them together on the press cylinder with steel pins and thus keep the plates from slipping out of line.

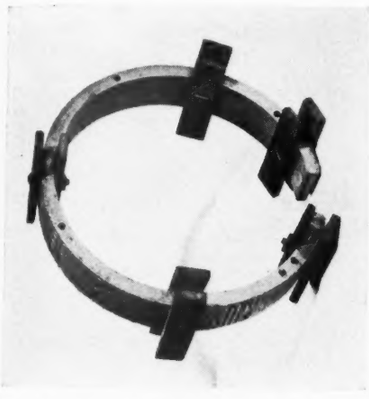


Fig. 1.—View showing drilling fixture devised by Fred Chevalier, Stereotype Superintendent of the Racine (Wis.) Journal-Times, for accurately locating position of holes in abutting edges of three-piece truck. Steel pins inserted in the holes prevent slippage of the center plate.

After some initial experimental work, I took a classified advertising page plate (because it has solid type all around the plate) and cut off a piece on the end about 1¼ in. wide. To this I fastened five sets of cleats about 3 in. long. The cleats were rounded on the inside corners so they would slide easily onto the plate.

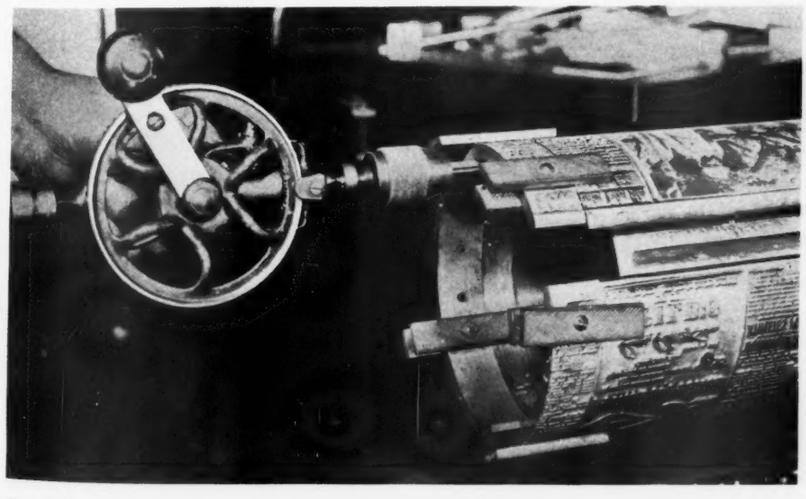
To make certain the holes in the fixture would be drilled accurately, I took it to a machine shop. I always use a hand drill now to drill the holes in the ends of the plates to prevent enlarging the holes in the fixture.

In using the drilling fixture, (Fig. 1), we fasten it over the end of the plate into which the holes are to be drilled. The head rule on the fixture is lined up with the head rule on the stereotype plate, after which the holes are drilled. The same procedure on the other plates is followed, the pins are inserted and the plates are ready for the press, where they are fastened together on the plate cylinder.

A No. 21 drill is used to make the holes and the pins are about 1½ in. in length.

Since we have been employing this inexpensive fixture, we have found that none of the plates on our three-piece trucks have slipped out of line during a run.

The things to watch in using the fixture are that the holes in the fixture itself are drilled true and that a hand drill is used when making holes in the stereotype plates to prevent enlarging the holes in the fixture.



The drilling fixture accurately positioned on the end of a stereotype plate. A hand drill is used to drill the holes in the abutting edge of the plate.

To Advertisers and Advertising Agencies

COMMENCING with the January 1944 issue, the trim size of *Printing Equipment Engineer* will be changed from 9 in. by 12 in. to 8½ in. by 11⅜ in. trim size.

The type page size will be continued as at present—7 in. by 10 in. (42 picas by 60 picas).

This change is being made concurrently with other printing trades magazines as a paper conservation measure.

Paper-backed Film Stock Problem Eliminated

M. E. TORRELL, mechanical superintendent of the Los Angeles *Examiner*, reports that a stock problem in keeping on hand a variety of widths of paper-backed film has been eliminated. This has been accomplished by buying only the 19 in. rolls and cutting them to size on a bandsaw. R. E. Chubb, photo-engraving foreman, hit upon the idea. The film is used in 6 in., 9½ in., 13 and 19 in. widths.

Foreman Waldo Hobbs of the Los Angeles Examiner's carpenter shop cuts 19 in. paper-backed film rolls to several widths on bandsaw, thus eliminating photo-engraver's stock problem.

Mr. Chubb got together with Foreman Waldo Hobbs of the *Examiner's* carpenter shop. A bandsaw is used to cut the film to desired width from the 19 in. rolls. During the cutting operation, the lights in the carpenter shop are turned off and two ruby lamps are turned on so the film won't be light-struck. The bandsaw blade must be sharp and must have a fair set. While being cut, the roll of film is held rigidly to avoid binding of the saw blade.

Joe Bloe Series Mirrors Plant Executives

COMMENTS from printing executives regarding the Joe Bloe series by W. W. Warfel are coming in to *Printing Equipment Engineer*. The story of Joe Bloe proves that Old Man Human Nature still is the important thing in the life of the mechanical and production executive. The series certainly is appealing to our executive readers because it is written from the *inside* of the printing plant.

Here are a number of comments:

PRINTING PLANT SUPERINTENDENT—I would almost swear you are taking sketches out of some of my sorry experiences. I can think of a couple good ones. I might even write 'em up and send 'em on to you.

STEREOTYPE SUPERINTENDENT—Hurry up! It's too long between drinks.

COMPOSING ROOM SUPERINTENDENT—For ——————— sake! Hurry Joe along. I can hardly wait to read about me in the next issue.

LABOR FOREMAN, STEEL MILL—Me and Joe Bloe are twins.

CONSULTING MANAGEMENT ENGINEER—I read it three times! It's a natural.

ENGRAVING SUPERINTENDENT—I read Joe Bloe as soon as the magazine arrives, then take it home and read it again. The next day I put it on the boss's desk with the page marked.

CONSULTING INDUSTRIAL PSYCHOLOGIST—The story is down to earth. Joe Bloe is a very real person. It is an amusing delineation of people in action. No honest person can be offended, yet every man from straw boss to general manager can see himself in a mirror.

PRESSROOM SUPERINTENDENT—That guy Warfel knows the inside of our plant. I'm rooting for Joe—he'll come out on top.

PHOTO-LITHOGRAPHERS *hold informative meeting in Boston — Present and post-war problems discussed—Fair trade practices for after-war selling of equipment stressed by Executive Secretary Soderstrom.*

DOMINATING the eleventh annual convention of the National Association of Photo-Lithographers held at Hotel Statler, Boston, on September 16, 17 and 18 were topics related to present and post-war offset-lith problems. Two of the principal speakers were John M. Wolff, Jr., Chief, Planographic Section, Printing and Publishing Division, WPB, and Walter E. Soderstrom, Executive Secretary of NAPL. A total of 346 lithographic executives and suppliers' representatives were registered.

Officers Elected

The following were elected to serve the association: President—Harry E. Brinkman, Foto-Lith, Inc., Cincinnati; Vice President—Rex G. Howard, Peoria Blue Print and Photopress Co., Peoria, Ill.; Treasurer—George E. Loder, National Process Co., New York, N. Y.; Legal Counsel—Capt. L. B. Montfort, Washington, D. C.; Executive Secretary — Walter E. Soderstrom, 1776 Broadway, New York, N. Y. A. G. McCormick, Jr., retiring president, was elected a director ex-officio, and Harold O. Ross, Ross-Gould Co., St. Louis, was elected a director.

A Hamilton wrist watch, suitably engraved, was presented to Retiring President McCormick.

Presents Plan for After-War Equipment Selling

Executive Secretary Walter E. Soderstrom presented a paper related to after-the-war selling of machinery and equipment and the need for fair trade practices, uniform terms and conditions of sale. Perhaps our report of Mr. Soderstrom's discussion in this issue of *Printing Equipment Engineer* may cause it to appear to have been entirely too blunt. While Mr. Soderstrom presented a logical analysis, upon a vital subject, yet it is impossible to quote his forward looking argument in its entirety.

Mr. Soderstrom cited two prime reasons for expanded installation and replacement of offset-lith equipment after the war. Because they are not participating in a considerable volume of work now going to lithographers, a great many letterpress printers are going to install lithographic machinery in addition to their letterpress equipment just as rapidly as they can acquire it after the war. The letterpress industry will take measures that will make it impossible for its executives ever to be caught napping again.

The other prime reason cited is that because of the imperative and insistent demands of war's necessities, the machinery in the lithographic industry's plants has been working almost continuously, and in many instances with hastily trained help. By the time the war is over, the great majority of this equipment will have been worn out and will have to be replaced. He asserted that the replenishing of this worn-out equipment with new machinery should keep the manufacturers of lithographic presses busy for a long period after the war.

The Other Side of the Picture

Because of our American system of free enterprise, the offset-lith industry has grown like weeds, unregulated and uncontrolled. As a result, many lithographing plants were established by men who had little or no actual experience, insufficient working capital, none or hardly any established accounts, and complete incapacity to obtain competent craftsmen. Hundreds of these hastily and ill-considered business ventures in the lithographic industry have met the failure they so richly deserved.

But the evils they wrought while struggling desperately to keep from going under remained to plague and perplex those who have steered a straight course undeterred by those early obstacles. "Among the evils inherited," said Mr. Soderstrom, "and which we are still fighting, are extremely low prices, exceedingly poor quality of work, and total inability to organize schedules of production or keep promise of delivery."

Mr. Soderstrom pointed out, however, that there is another side to this situation which is gratifying and satisfactory. A group of men came into the industry who had the essential background of sound management and training. It was they who purchased and installed proper equipment of good quality. They were the ones who employed and developed competent help, and who determined that they would make a profit on every job they handled. This group of lithographers have grown up, have prospered, and have found a permanent place for themselves in our industry.

Give Heed To Serious Factors

The speaker stated that three serious threats to the future stability and prosperity of the offset-lith industry exist. These will be felt by the industry in the

(Continued on Page 43)

Trade Compositors Meet—The twenty-fourth annual meeting of the International Trade Composition Association was held at Hotel Statler in Cleveland, Tuesday and Wednesday, September 21 and 22. A top-flight program was prepared for the delegates. Some of those in attendance are shown here:

1—Group of ITCA Executive Officers—Front (left to right): Gertrude J. Schmidt, Secretary, Philadelphia; S. Walter Sears, President, hails from Mono-Trade Co., Minneapolis, Minn.; Back (left to right): John W. Shields, Treasurer, Bridgeport, Conn.; L. A. Neumann, Vice President, who is President and General Manager of M&L Typesetting & Electrotyping Co., Chicago.

2—C. H. Griffith, Vice President, Mergenthaler Linotype Co. and Frank Lightbown, Manager Cecil H. Wrightson, Inc., Boston.

3—J. L. Frazier, Editor Inland Printer; Frank M. Sherman, Advertising Director, Lanston Monotype Machine Co. Mr. Sherman is honorary life member of ITCA.

4—George Trenholm, Type Designer and Consultant, Intertype Corporation; Jay S. Sheldon, Typographic Service, Clevelahd.

5—Julia Kersteen, Cleveland Convention & Visitors' Bureau, Cleveland; William Howell, Michigan Representative, Imperial Type Metal Co.; Eulalia Bucholz, Cleveland Convention & Visitors' Bureau, who with Miss Kersteen, managed registration of all those attending the ITCA meeting.

6—Kimball Loring, Machine Composition Co., Boston; J. G. McGreevy, General Sales Manager, Gardiner Metal Co., Chicago; Sydney Levison, Michigan Typesetting, Inc., Detroit; Herman Lewis, Detroit Typesetting, Detroit.

7—This picture was taken at the moment of presentation of Honorary Life Membership to Hon. A. E. Giegengack, United States Public Printer by President S. Walter Sears of the International Trade Composition Association.

8—Hon. A. E. Giegenack, U. S. Public Printer; Vice President A. T. Mann, Jr., Intertype Corporation, discuss things, while E. C. Osterland, Manager of Cleveland Typesetting Co., gives his order to the waiter at noon-hour luncheon.

9—Wm. J. Aiken, Manager of Aiken Typesetting Co., Cleveland; Arthur Overbay, President, Typographic Service Co., Indianapolis, Ind.; Harry Levin, Manager, General Type & Composition Co., Chicago.

Announces Electrotype B.C.F. Addition Agent

In September, E. I. du Pont de Nemours & Co., Wilmington, Del., announced to the public the B.C.F. Addition Agent for use by electrotypers in solution as a copper conservation measure. In its December 1942 issue, *Printing Equipment Engineer* carried a complete article about B.C.F. Addition Agent. Latest report in the *du Pont Magazine* for Sept.-Oct. by J. Homer Winkler of Ace Electrotype Co., Cleveland, is that through the use of the Agent, it is possible to produce electrotypes having a thinner, harder shell, the same press wear as obtained formerly with the thicker shell, and the amount of copper scrap ordinarily formed in deposition has been reduced to less than half by weight.

Executive Details

PRODUCTION Manager Arthur Brooks of the American Colortype Co., Chicago, addressed the Cincinnati Craftsmen's Club recently. Particularly, with respect to plant management, he stressed the importance of employing clerks to handle much of the detail work, leaving the plant foremen free to carry out the work for which they are paid. The services of women for certain duties have been found to be satisfactory in his plant. A source of manpower is that group of men who have been rejected or discharged from the armed services. He urged printers to pass up work for which their plants are not equipped. He also recommended listening to the advice of equipment manufacturer and supplier representatives.

EMPLOYMENT AND SERVICE

FOR SALE—Cloth-bound volume of ANPA Mechanical Bulletins, Nos. 35 to 85 inclusive. If interested send query to Box 107, c/o *Printing Equipment Engineer*.

WPB *News and Notes*

Restrictions on Copper and Zinc Use Combined in New Order M-339

RESTRICTIONS on the use of copper and of zinc in printing plates have been combined in a single order, M-339, which also includes certain new provisions, Harry M. Bitner, Director of WPB's Printing and Publishing Division announced on August 28. These operations formerly were governed by Orders M-99 and M-9-c. The new conservation Order M-339 and the amended Order M-99 on the use of obsolete plates were issued August 28. Through issuance of M-339, the administration of copper usage by photo-engravers and electrotypers has been transferred to the Printing and Publishing Division.

Zinc continues to be restricted to 50%, by weight, of a person's 1941 quarterly usage, and copper is continued at 60%, by weight, of a person's 1940 quarterly usage. A new provision permits the borrowing of 15% against the next quarter's quota, and also allows the use of any unused quota from the previous quarter.

To liquidate inventories of 16 ga. photo-engravers' sheet copper which were in finished form before July 1, 1943, and which are now in the possession of photo-engravers and suppliers, the new order provides that for each 4 lbs. of such 16 ga. copper which a photo-engraver uses, he may charge only 3 lbs. against his allowable usage. Please note that there is no similar provision for the partial ex-quota use of 16 ga. zinc.

Electrotypers will be permitted 50% of their allowable usage of copper in the form of virgin anodes beginning with the fourth quarter of 1943, instead of 25% in this form and 75% in the form of scrap. No increase in the over-all allowable usage of 60% of a person's 1940 quarterly usage is permitted except that a 10% bonus is allowed when 95% or more of a person's allowable usage is in the form of scrap. The delivery, acceptance and use of copper scrap remains subject to the controls of Order M-9-b.

The provisions of Order M-9-c relating to copper for copperplate engraving are retained in the new order. No copper, except old engraved plates or copper which the engraver had in his possession on December 31, 1942, may be used for copperplate engraving, and 3 lbs. of old copperplate engravings must be disposed of as scrap for each pound of copper used in making new engravings.

The effect of allocations, preference ratings and inventories on a person's allowable usage is explained in the new order. A person's allowable usage of copper and zinc is established by the order and may not be increased by any allocation or preference rating granted for the purchase of these materials or by their use from inventories. Printing plates which are produced on preference rated orders must also be produced from the plate-maker's allowable quota under the order.

Newsprint Order L-240 Amended

NEWSPAPER publishers are required to make further cuts in their consumption of newsprint during the fourth quarter, beginning October 1, 1943, the War Production Board announced September 28. An additional reduction of approximately 5% in use has been imposed by a new amendment to Order L-240. This is in addition to the cut of approximately 5% announced last July for the third quarter, which increased the limitations of the order as originally issued December 31, 1942.

Limitation Order L-240, as amended, otherwise is substantially unchanged, H. M. Bitner, Director of the Printing and Publishing Division, WPB, stated.

The first 25 tons for newspapers using less than 500 tons are still exempt from further reduction.

In calculating the total reduction effective beginning October 1, newspaper publishers will take into consideration the 5% curtailment imposed on July 5, when the first additional cut was announced, and combine it with the second cut of 5% now ordered.

Examples of how the total reduction will operate for various representative tonnage groups on a sliding scale basis for the fourth quarter are as follows:

Users of Tons per Quarter	Percentage Cut Required
25 tons	0.00 percent
50	5.0
75	6.67
100	7.50
200	8.75
300	9.17
400	9.37
500 tons or more	10.0

The percentage of reduction are applied on a base arrived at by taking 103% of the tonnage used to print the net paid circulation only, during the fourth quarter of 1941. This base is substantially less than the tonnage used to print the gross press run.

Quotas Can't Be Switched

COMMERCIAL printers who have unused print paper quotas may not become publishers of magazines or books, the War Production Board advised the printing and publishing industries.

The Printing and Publishing Division warned commercial printers, magazine publishers and book publishers that paper quotas allowed for printers under paper Limitation Order L-241 cannot be used to supplement quotas permitted for publishers under Orders L-244, covering magazines and periodicals, and L-245, covering books.

"Some commercial printers", said H. M. Bitner, Director of the Printing and Publishing Division, "have the erroneous impression that their paper quota for 1943, based upon usage during their base year of 1941 under Order L-241, may be partially used in the printing of magazines or of books. Nothing could be farther from the fact, nor more contrary to the concept of those respective conservation orders.

"Orders L-244 and L-245 restrict the tonnages of paper which magazine and book publishers may put into process. It makes no difference whether the publisher, or his printer, may have additional paper physically available; paper used for such publications may come only from the publisher's quota.

"Neither is it permissible for a commercial printer, who was not an actual magazine or book publisher in 1942, to begin publishing a magazine or book in 1943 unless he has applied for and been granted a paper quota under magazine Order L-244 or book Order L-245. Any commercial printer who may be engaged in such an undertaking will be subject to investigation by the Compliance Division of WPB."

No interchange of paper quotas assigned under any of the four limitation orders (newspapers, magazines, books of commercial printing) may be made between organizations or individuals holding such quotas, without specific and advance WPB approval.

Appointments in Relief (Letterpress) Printing Section

Joseph A. Murray has been appointed Chief of the Relief (Letterpress) Printing Section of the Printing and Publishing Division of WPB. Formerly, he was secretary of G. E. Sheppard Co., Long Island City, N. Y. Charles T. Brose of Western Printing and Litho's Poughkeepsies (N. Y.) plant has been named chief consultant on Commercial Printing in this section.

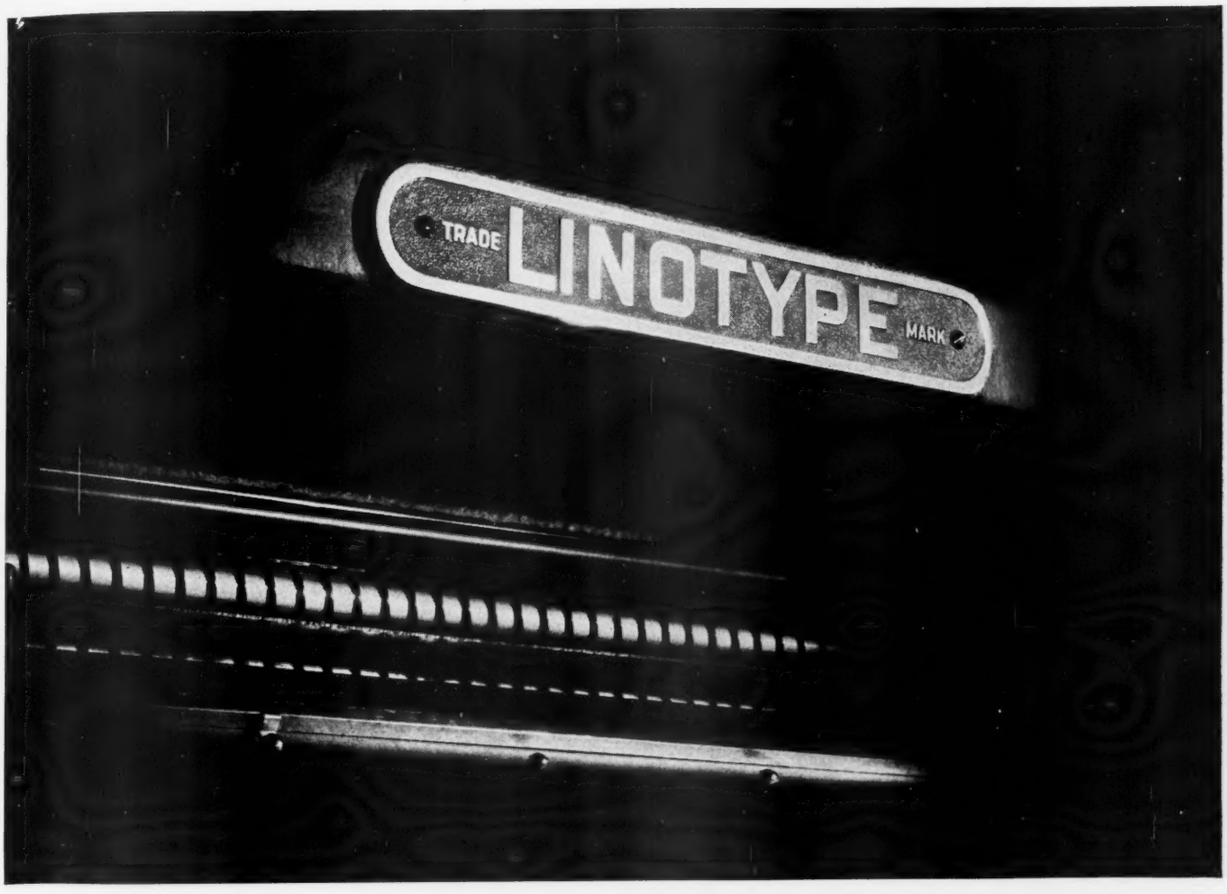
Serious Newspaper Shortage in 1944

ACCORDING to a letter written by Donald M. Nelson, WPB Chairman, to Rep. Lyle H. Boren, chairman of the House Subcommittee investigating the newsprint situation on September 21, newspaper publishers will be confronted with a serious print paper shortage in 1944, at which time considerably less newsprint will be available than in 1943.

Even when newspaper publishers accomplish the additional 5% saving they agreed to recently through their Industry Advisory Committee, consumption will still be about 94,000 T. in excess of production for the fourth quarter of 1943.

Mr. Nelson pointed out that unless

★ ★ ★ INTEGRITY ★ ★ ★



With every resource at its command, Linotype is delivering a type of war product which has inspired the high confidence of our Government. It is the same sense of obligation that characterizes Linotype's efforts to assist the Press in maintaining high wartime production standards in composing-rooms.

Faith in the product . . . faith in the organization . . . faith in the power of print—and men . . . this spirit is responsible for the integrity of any equipment bearing the trademark—

★ ★ ★ ★ *BACK THE ATTACK—*

TRADE LINOTYPE MARK

★ ★ ★ ★ *KEEP BUYING BONDS!*

Set in Linotype Memphis Medium

efforts of WPB and the industries to increase the cutting of pulpwood in the U. S. and Canada bring unanticipated favorable results, present reserves of newsprint will be exhausted shortly and a further, perhaps far deeper, cut will be required in 1944.

In his letter to Representative Boren, Mr. Nelson pointed out:

"In connection with these efforts to stimulate production, four facts should be kept in mind:

"(1) The shortage of manpower is a critical problem in many industries. It is not likely that any large pool of additional labor can be found and it is only through persistent effort, in cooperation with the industry itself that further declines in manpower may be avoided and the present trend turned upward.

"(2) Wood which is cut now will not appear on the market as finished newsprint for from 10 to 18 months. Therefore, increased production will not stave off impending limitations of consumption in the first half of 1944.

"(3) Even if the cutting of wood and the production of pulp are increased, there are vitally essential uses for the supply besides newsprint, such as waterproof containers for the armed forces, construction materials, explosives, etc.

"(4) Only 25% of the newsprint consumed in the United States comes from American mills. Over 72% is manufactured in Canada, from Canadian wood, and a little less than 5% is imported from Newfoundland. It is apparent, therefore, that a solution of the production problem rests largely in Canadian hands."

Decentralization of WPB's Operations Function

A POSSIBLE 33% reduction of necessary travel by business men to and from war-jammed Washington, a slashing of their routines of paper work (25 to 40% in some operations), and a WPB organization geared to greater speed and responsiveness, are the goals of a program adopted by War Production Board Operations Council on September 21 as announced by H. G. Batcheller, Operations Vice Chairman.

The program calls for a sweeping decentralization of the whole operations function. It will move out of Washington to the WPB regional offices much of the machinery of production control and with this machinery will go greater autonomy and consequently greater responsibility for both the 13 Regional Offices and the 92 District Offices of the agency.

It is believed that the move will create, in effect, 13 "Little WPB's," able to function without active assistance from Washington except in basic policy matters and in the instance of problems which are beyond their own resources. Each Regional Director will now be known as a "Regional Chairman" and within his own area, his job will roughly parallel that of the WPB Chairman.

The primary aim of the move is to produce greater speed and efficiency throughout the entire process of operations administration.

It is hoped that by the end of the year a major portion of the agency's paper work will be handled in the local offices. At that time only over-all controls will still remain in the Capital if current plans carry through.

No Shift in Base Period

THE likelihood of a shift in base period for estimating book publishers' paper quotas under Order L-245 from 1942 to 1943 appears extremely remote, Harry F. West, Chief of the Book Publishing and Manufacturing Section, War Production Board announced early in September. "Considerable speculation on this score seemed to be current among publishers, and many of them may be led to dissipate their available quotas under this Order with the impression, for which there is no existing justification, that the 1942 base period may be changed to 1943", Mr. West said.

The Dumore Stripper

A stripping machine called the Dumore Stripper, has been announced by the O. W. Sutter Mfg. Co. Mr. Sutter states this machine will take gummed

View of Dumore Stripper just announced by O. W. Sutter Mfg. Co.

tape from ¾ in. to 3 in. wide. The machine will accept books up to 1½ in. thick and 15 in. long. In practice, the gummed tape is cut, moistened, applied and trimmed to the edge of the book by the operator in one operation. It is reported that in actual tests 400 average size books have been stripped in one hour.

Correction

On page 18, September issue of *Printing Equipment Engineer*, due to the deletion of a line of type, the meaning of a sentence was garbled. In our report of the Memphis Craftsmen's convention during the discussion on water-base ink for soft-paper rotary printing, the sentence should have read: "It was stated that because printing presses may have to be modified in design, there is little likelihood of either the ink or the presses being available until after the war. The process is being used regularly, at last report, in the Charleston *Gazette* on one press unit."

EXECUTIVE ¶s

Edward D. Morris joined the staff of the Lithographers National Association in New York the latter part of August. He fills the vacancy caused by the resignation a year ago of Stanley C. White to accept a lieutenant's commission in the U. S. Navy.

At the annual meeting of the stockholders of Harris-Seybold-Potter Co., Cleveland, held on September 21, A. T. Colwell was elected a director. Mr. Colwell is second vice president and member of the board of directors of Thompson Products, Inc., and Thompson Aircraft

A. T. Colwell has been elected director of Harris-Seybold-Potter.

Products Co. He was graduated from the U. S. Military Academy in 1918, and subsequently received an engineering degree from the U. S. Army Engineering School at Ft. Humphreys, Va. He is also a member of the board of director of two other companies. He has served as national president of the Society of Automotive Engineers, is a member of the governing board of S.A.E., is a member of the steering committee of Central Aircraft Council and has been active in N.A.A., and is an associate fellow in the Institute of Aeronautical Sciences.

Thomas Roy Jones was elected to the board of directors of A. G. Spalding & Bros., Inc., at a board meeting held September 16 in New York. Mr. Jones is president of American Type Founders, Inc., Elizabeth, New Jersey.

George M. Gray, 82, printing company executive and former president of the Ohio Printers' Federation, passed away during the early part of September. He was the father of Gordon Gray, well known Fostoria (O.) printing executive.

Vera I. Cushman, 1235 Second St., Lorain, O., announces that she has been appointed selling agent by Linotype Parts Co. for Cushman line-composing machine motors, parts and supplies. Mrs. Cushman will cover territory in the central states.

DON'T LET RESTRICTIONS

Worry You!

IF YOU RUN A We may be able to help you on newsprint restrictions.

DUPLEX PRESS We'll gladly assist you with repair priority regulations.

Write ★ ★ ★ the field and service department at Battle Creek—give them the details—back will come the answer.

Sure! WE'RE BUSY MAKING AXIS POISON BUT WE CAN ALWAYS FIND TIME TO HELP OUR CUSTOMERS ★ ★ ★

THE DUPLEX PRINTING PRESS CO.

BATTLE CREEK, MICHIGAN

Fred Danner, president of Danner Press in Akron, O., was appointed member of the small business commission by Governor John W. Bricker early in September. The commission is made up of four other business men, five state senators and five state representatives.

Tingue, Brown & Co. has opened a branch office at 507 Peters St., S. W., in Atlanta, Ga. This branch will be both a distributing center and a processing plant, in addition to the company's plants in New York, Chicago and Los Angeles. The company announces that

G. G. Sanborn will manage new Atlanta office for Tingue, Brown & Co.

in addition to furnishing press blankets and draw sheets, the members of its organization will work out any mechanical fabric problem. G. G. Sanborn, who has been with the company for nearly 20 years, will be in charge of the new Atlantic office.

F & L Offset Ink Specimen Book

A new type of specimen book designed especially to cope with the problems of a war economy has been issued by The Fuchs & Lang Manufacturing Company, Division of General Printing Ink Corporation. Entitled *The F & L Standard Colors*, the book is a compilation of 52 standard inks formulated for the offset press—lithographed on both offset and coated offset stocks. Each ink specimen shows screen values, solids, reverses, and is accompanied by detachable swatches for the convenience of customer, artist and pressman. Size of the book is 5½ in. by 9¼ in. An informative chart contains considerable data as to the qualities of the different colors, such as whether any ink is alkali resisting, opaque, fast-to-light, is figitive, and so on.

The two photographs enclosed are sent so that you may illustrate your editorial comments concerning this book should you wish to. You may bill us for the expense involved in the reproduction of these photos.

A copy of the book will be mailed to any printing executive. Make your request to The Fuchs & Lang Manufacturing Company, Division of General Printing Ink Corporation, 100 Sixth Avenue, New York 13, N. Y.

Intertype Receives Production Award

THE Army and Navy, through Robert P. Patterson, Undersecretary of War, have conferred upon the employees of Intertype Corporation, of Brooklyn, the Army-Navy Production Award for high achievement in producing materials needed for war. The flag and lapel pins, symbolic of their production efforts, were formally presented with appropriate ceremonies Thursday October 14.

Morley Wins Army-Navy Star Award

The Morley Company of Portsmouth, N. H., is commemorating its fifty-third year of operation by winning the coveted Army-Navy "E" Award in February 1943, and by securing the Army-Navy Star Award. The nomination for the latter award was made by the Boston Chemical Warfare Procurement District, whose commanding officer is Col. S. E. Whitesides.

For its six months work after the original Army-Navy Award was made in February 1943, the Morley now receives a new pennant with the white star already affixed. This entitles all new employees who have come into the plant since the original award, to receive the lapel pin originally presented to all personnel at the first ceremony.

Col. Whitesides sent his congratulations to the workers and said the Morley Company is to be commended for its excellent work in the production of the shield issued to troops for the protection of their eyes against liquid gas dispersed by enemy planes.

The Morley Company passed through a difficult period is continuing its stereotype mats production while converting facilities to reach the production goal for the Boston Chemical Warfare Procurement District.

Rouse Company Awarded Army Ordnance Banner

ON September 28, H. B. Rouse and Co., Chicago, and its employees were awarded the Army Ordnance Banner. In an announcement sent out by the company, it is stated that the award was made on the basis of maintained production and the development of special machinery which resulted in reduced costs to the Government.

Publishes Third Edition

Certified Dry Mat Corporation has published the third third edition of its booklet: *How To Get the Most From Your Dry Mat and Stereo Expenditures*. The booklet is illustrated and consists of 40 pages with cover, 5 in. by 6¾ in. The booklet has been published especially for the benefit of production managers of advertising agencies and large national advertisers. In it, in non-technical language, is explained the preparation of copy for newspaper campaigns which are reproduced by the stereotyping process, and the technique of the process itself. Copies of the booklet are available from Certified Dry Mat Corporation, 9 Rockefeller Plaza, New York 20, N. Y.

The top of each sheet of F&L Offset Color Ink specimen book contains a series of perforated swatches which can be removed for convenience of customer, artist and pressman. Ink symbol is printed on each swatch.

WILL YOU BE A V-DAY PRINTER?

Comes V-Day, and your customer says, "Here's the job . . . can you do it by offset?" If you're a V-Day printer you won't care whether he specifies offset lithography or letterpress. *You'll have both!*

The day will then have passed when you need be concerned over plates being furnished, figure the cost of electros, or limit your choice of paper to suit one process. You'll be able to answer your customer **"SURE!"** because your shop will be equipped to take and turn it out by whichever process is best for the job.

Offset lithography's gain in favor has sound reasons to support it. And the tremendous strides being made now in technique and operating economies will still further increase its popularity, for years.

ATF will be ready, when V-Day comes, with everything . . . from darkroom to pressroom . . . for the complete offset department. Your ATF Salesman can give you full information *right now,* even to approximate costs.

SET ASIDE DOLLARS *NOW*

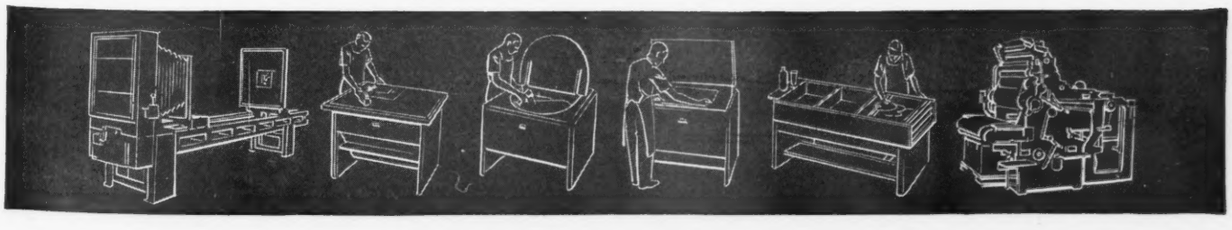
for the offset equipment you will need after Victory

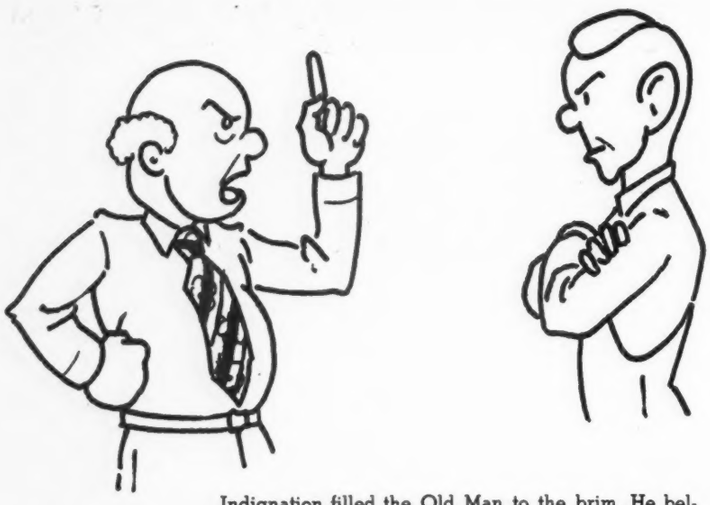
AMERICAN TYPE FOUNDERS

Offset Division

200 Elmora Avenue, Elizabeth 3, New Jersey

Branches and Dealers in Principal Cities . . .





Indignation filled the Old Man to the brim. He bellowed: "You can't talk to me like that. You can't pass the buck to me. After all, don't forget, *I am the boss!*"

Foreman Joe Bloe interviews

Publisher Daub upon his (Daub's) return from the hospital — The Old Man walked with difficulty — After a tempestous scene, Joe is discharged, but is reinstated shortly

By WILLIAM WYATT WARFEL

THUS FAR

The Daub Publishing Co. is experiencing growing pains, business volume and production having increased gradually over the years.

SCHMEAR N. DAUB is president and general manager of the company which he operates on a strictly one-man basis.

JOE ("Fluttergut") BLOE is the plant foreman. His responsibilities have been increased from time to time without corresponding authority and without increase in pay.

OSCAR GRAPHCHART (a distant relative of Publisher Daub's wife) recently graduated from a statistical school. He makes an impression upon Daub. Joe resolves to learn all about the making of charts and starts a notebook for guidance in attempting to cure those conditions which prevent proper production administration. The notebook leaves published concurrently with the installments show that Joe is acquiring the knack of making charts—and is finding out what is wrong with his organization.

MOM is Joe Bloe's wife. Like many another wife, she diplomatically works on Joe to help him along with his job.

ERNIE is the philosophic bartender in a nearby saloon, who sagely hands out advise (in rough fashion) to his customers on matters related to the human element angle.

GORIE DAUB MESSE, ink grinding room foreman (a shirt-tail relative to Daub), is color blind when drunk. One Tuesday morning green ink was pouring from the red ink mill. Good-hearted Joe gets the blame but tries to clean up the mess and in doing so he is smeared with ink from head to foot. Daub send for Joe to come to his office immediately. Joe doesn't stop to clean up. He is ejected from Daub's office.

O. H. YEZZIR, assistant office manager, and

BULLAM GOODE, assistant sales manager, collaborate to auction Joe off, as a giant human lipstick, before a miscellaneous group of plant employees. Depressed and humiliated, Joe finally escapes, cleans up. Instead of going as usual to the Press Executives club, he steals furtively into a Greek restaurant around the corner for lunch.

In this Installment VI, Joe's troubles continue.

VI.

THE rest of Tuesday passed quickly. When anyone tried to kid Joe about the morning's performance, the annoyer was made to feel like he had stepped on a hot slug with bare feet. His firmness soon silenced his grinning colleagues. He kept busy. Many little details required attention and quitting time arrived quickly. Joe telephoned Mom and suggested an early supper.

As he stepped into the building lobby on the way home, Joe was nearly knocked down. The Old Man rushed out of the elevator headed for the entrance. He stopped short when he bumped into Joe. He reached out as if to wring Joe's neck, snarling: "Wait in my office till I get back from the hospital."

The elevator man gave Joe a sympathetic glance. The Old Man's secretary was gone for the day. Joe parked himself in the customer's chair. Casually, he leafed through several magazines. Finally it dawned on him that the troubles of the day precluded thinking of anything else. He reviewed all the difficulties and annoyances. None seemed serious enough to warrant this punishment. It was just like keeping a kid after school for stumbling on the staircase. It wasn't as if he had thrown spitballs or dipped a girl's pigtails in the inkwell.

About an hour later the Old Man returned. He walked with difficulty. His feet moved outward at peculiar angles as if a certain physical friction had become unendurable. His glare was hot enough to melt steel. Joe sat back and awaited the certain blow. It was not long in coming.

The Old Man stood looking out of the window for a while and then turned to Joe with a compassionate expression on his face. It appeared he had to do something he didn't want to do. Joe had seen that expression everytime someone was fired. He braced himself for the ordeal.

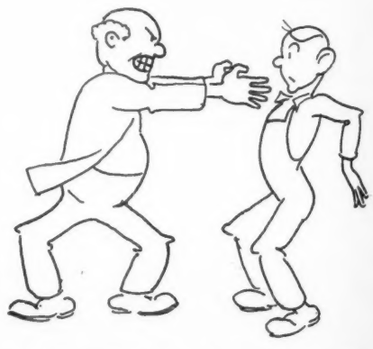
"Joe", said the Old Man quietly, "You have been here with us for a long time. I judge it must be nearly twenty years."

"That's right, Boss," said Joe eagerly, anxious to impress his long years of service, "it's almost twenty years."

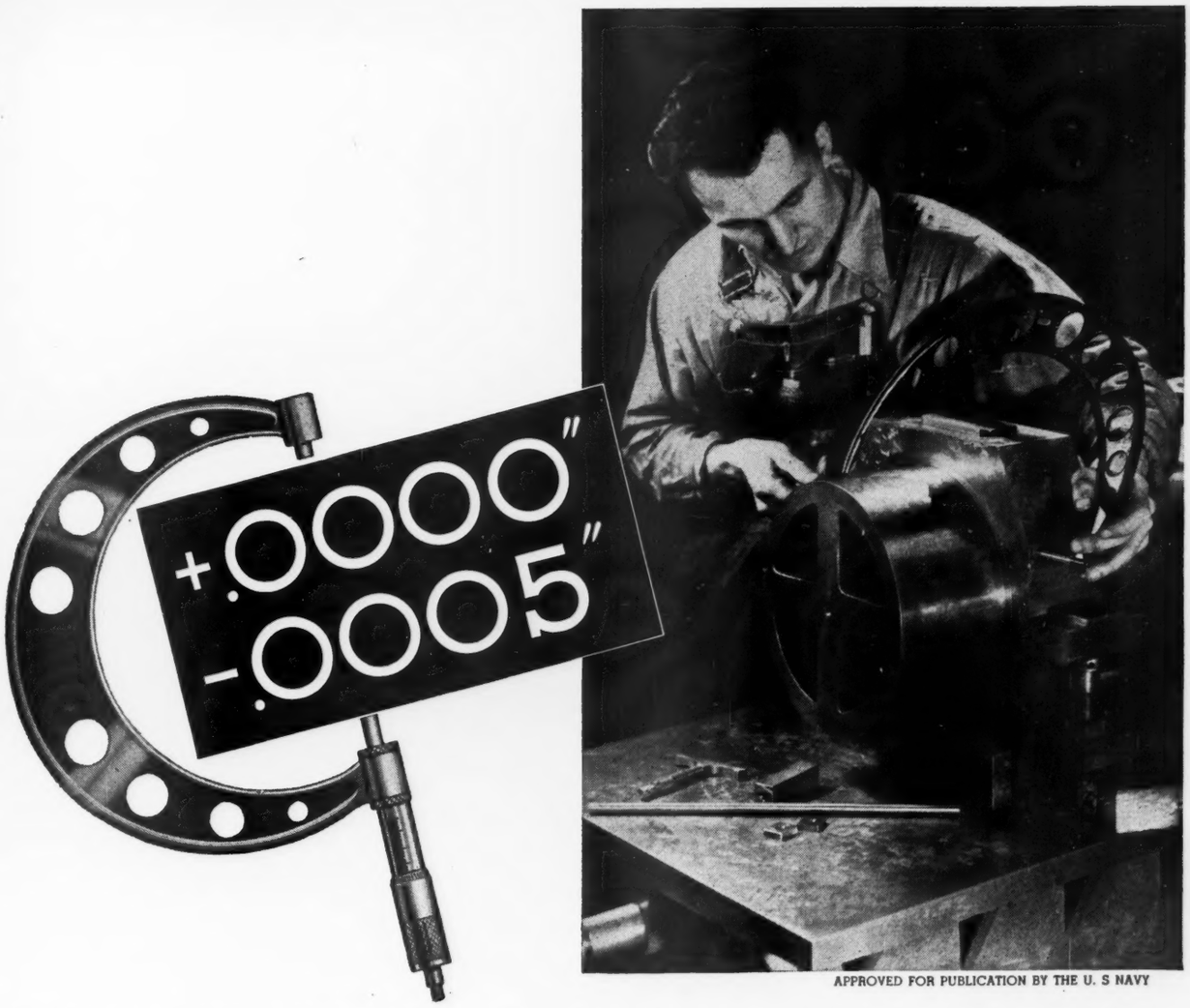
"Please, Joe," said the Old Man patiently, speaking as to a child, "I have a painful duty to perform. It will hurt me more than you. Please don't interrupt me."

"I won't, Boss; I won't say a word," said Joe before he thought and then wished his tongue would only remain quiet.

The Old Man paid no attention to Joe's interruption. He went on in the same quiet tone of voice: "I remember the day you asked me for a job. It was in the middle of winter; four feet of snow covered the ground. You came into my office with wet, dirty shoes; the snow and filth melted off your clothes and nearly ruined my rug. Ever since that day, when



As Joe stepped into the building lobby on the way home, he was nearly knocked down by Daub. He reached out as if to wring Joe's neck and snarled: "Wait in my office until I get back from the hospital!"



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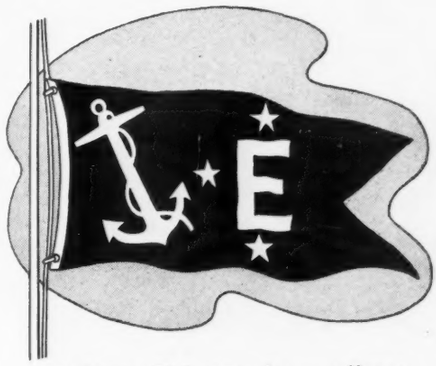

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I hired you against my best judgment, you have been the same sloppy Joe. This cannot go on any longer." The last sentence was pronounced like a preacher's benediction. The tone was as kind as it was final.

Joe realized that the Old Man was not merely reading the riot act. It dawned on him that the faithful employee was in process of being fired. Whenever the Old Man worked himself up to this disagreeable duty, his memory clicked like mats dropping into the assembler. This rehearsal of high spots could continue for hours. Come hell or high water, Joe knew this was the time to correct a few impressions accidentally or intentionally planted in the Old Man's head. He remembered one of Grampa's shots: "Strike while the iron is hot". Joe knew the Old Man was like many people who, after making a statement, believed it implicitly and would swear it had form and substance. Joe struck hard.

"Boss," said Joe in a very determined tone, "I didn't come here to get fired. I came here to work. And I have worked. I have turned in a darn good job, and if it is the last thing I ever do around here, I'm going to give it to you right now, even if I have to lock your office door to keep you here and make you listen."

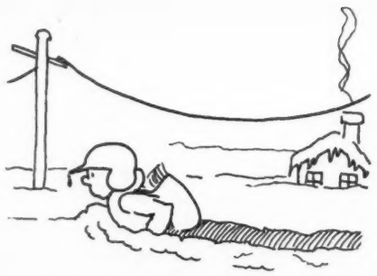
The Old Man gave Joe a funny look. He sat down but jumped up quickly. This apparent mishap turned him from a soft-spoken, patient man into a man dominated by raging fury. He ranted:

"You and your monkey business. If you are not messing things up, you are pulling practical jokes. Poor Gorie is in the hospital because of your locking him in the washroom. He tried to climb out and nearly broke a leg. We will have to pay the bill. That wasn't enough for one day! You had to slip some sandpaper in the toilet paper roll in my private room! Two of us in the hospital the same day because of your practical jokes. See the cashier tomorrow. That's all." The finality of voice was that of acid eating into metal.

"No, Mister Daub," said Joe quietly as he stood up and walked over to the Old Man, "that ain't all. I'm fired now, so you ain't my boss no longer. O.K. For twenty years you have called me a numbskull. If I gotta leave here, we will straighten that out before I go."

The Old Man snickered and said, "Joe, don't be so heroic all of a sudden. There must be something to what I say. Why, just the other day you admitted all that janitor trouble was your fault. I never told you I knew about it, but there was trouble with the janitors two hours after I gave you that added responsibility. Two of them refused to work down in the business office. Jack Ash brought them up here and I straightened it out by giving them each an order for a broom. That settles the matter. It proves you were not on the job. I had to step in to keep your people working."

Joe had sense enough to keep his mouth shut occasionally. Luckily, this was one of those times. Some hidden force tied his tongue and prevented him from interrupting the Old Man. Grampa had a good one for that: 'In order to speak short on any subject, think long'.



"Mister Daub," said Joe. "The morning of that big snow I delivered John Donkey's route while he sat at home. His mother was afraid he'd get wet feet. When I got through he took the book, got on the trolley car and came to your office to prove delivery."

Stepping back a few paces, Joe surveyed the Old Man from all angles. He looked at him as if he were a new person —one he had never contacted before. This thorough inspection nettled the Old Man who finally asked, "Joe, what are you looking at?"

"Mister Daub," said Joe with a sneering grin, "you got me right. I am all those things you called me—a numbskull, a nitwit, a dumbell and some more to boot. I ain't never seen you before. I sweated a week to get at the facts on the janitor trouble. I thought I had 'em all. But I missed the most important one of all. One fact turns the whole thing upside down. You just gave it to me. You butted into my department and, without my knowing it, you gave two of the janitors brooms. The fight started because two janitors had new brooms—the others only had old ones."

Indignation filled the Old Man to the brim. It overflowed like hot metal spattering a wet floor. He bellowed, "You can't talk to me like that. You can't pass the buck to me. After all, don't forget, *I am the boss!*"

"Correct as hell!" piped up Joe, determined to hold the edge. "What you mean is, you *were* my boss. You just fired me. I don't work here no more. And, what's more, I ain't no disgruntled ex-employee. I am a guy who has a grievance—that's what Oscar called it. I got a grievance that goes back twenty years. That kind of crap can ruin my livelihood. So, we are going to do something about it. If you are half the fair-minded man you say you are, you will square accounts before I go elsewhere for a job."

The Old Man took a deep breath as he looked at a Joe he never saw before. He paced the floor slowly, taking care to send each foot out at the same awkward angle. This was a problem to face and solve promptly. On the one hand Joe committed les majesty—a violation of the dignity of a petty sovereign—and on the other hand he pleaded for fairness. The dig at his pride hurt.

"Joe," said the Old Man, speaking slowly and distinctly, "I always bend over backwards to be fair. No one has ever before accused me of unfairness."

"I guess that's the trouble," said Joe. "You keep yourself and your mind so occupied trying to be fair that you make life miserable for guys like me. You have so many people on your neck you never have time for a real problem. You got a lot of assistants who 'yes' you to death and push all the details on you. I have been waiting here for twenty minutes sometimes while you was settling the future of some employee's kid or working on some problem for the Tibetan relief corps. No wonder you don't have time to look at my problems. Then one of those wiseguys puts in his oar and gives you a line of applesauce. When I get the answer it don't fit the problem. Just the other day you told me I was always trying to tell you something. You said you had to get the answer from some one else. Maybe I tell you the facts. Maybe you don't want facts."

By this time the Old Man was in a brown study. The things Joe spilled had a ring of truth. He was discussing facts. To help that thought along, Joe had not expressed them in a bitter way. The Old Man looked at his watch. Before he could say a word, Joe came up with another argument.

"Mister Daub," said Joe with a broad smile, "Nary once have I asked you to get a relative out of jail or give one a job. I never asked you to use your influence to get me on some committee. My family has never been on your neck. Those are a few more reasons why I am entitled to some of your time—*right now*."

"Very well, Joe," said the Old Man with good grace as he mustered up a smile, "This seems to be your show. You certainly have had plenty to say. Anything else?"

"Yes, Mister Daub," said Joe in the same even voice, "I have plenty more to say. When some men get fired, they go out and try to ruin the business with a lot of half truths; some just figure that if the boss is wrong he can find it out for himself in his own good time after he gets hooked for plenty. Now, I am going to be different. I can't leave this town. So, this must be settled so that I can go out and find a job and hold it on my merits. I don't want to come back here and clean up the joint after a lot of lousy tripe gossip hurts me on my new job. I want to settle my grievance here and

"While you are gone on vacation," said Daub to Joe, "we will fix a new office for you with your name on the door." "Does the sign painter's bill come out of my pay?" asked Joe with a grin. The Boss shoved him out into the hall and Joe thought of running all the way home to tell Mom about it.

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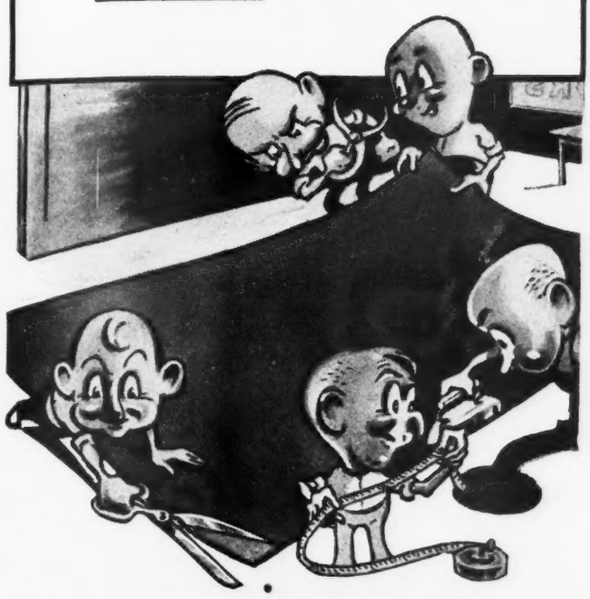

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now. Are you the fairminded man you say you are?"

The Old Man gave Joe a quizzical look, smiled and said, "Start at the beginning Joe. My dinner can wait."

"Mister Daub," said Joe, "a while ago you told me how I came in here for a job. Let's start with that one. For three years I tried to get a route here so I could keep going to school. You would never give me one because I wasn't dressed well enough. You said I didn't look classy enough to deliver *The Bladder*. The morning of that big snow I delivered John Donkey's route while he sat at home. His mother was afraid he would get wet feet. When I got through, he took the book, got on the trolley car and came down to your office to prove delivery. He didn't give me a nickel. He promised to speak to you about a job for me. I was fool enough to believe him when he said he would get me a job here. I even had to walk while he rode. Did he tell you I delivered his route that day?

"No, Joe," said the Old Man as he massaged his bald dome, "John did not mention it to me. It just so happened that we needed some one to help in the basement. I remember the entire circumstance. When John walked in with his delivery book his clothes were neat and his shoes were shined. I remember complimenting him on his appearance. I was so pleased I gave him twenty-five cents more per week."

"That's the way it's been right along," said Joe bitterly. "It never dawned on you to wonder how he could look so damn sweet in a snowstorm. Every time there has been an emergency, I do the job and someone else gets the credit. Same thing today. That shirt-tail relation of yours, Gorie Daub Messe, was drunker than a hoot owl. I locked him in the washroom. I cleaned up the mess. I got out the red ink. Bullam Goode gave you a report on how well we got out the run today. You complimented him. What's fair about that? I suppose you gave him a raise, too."

The Old Man stopped pacing suddenly. Joe's jab hit him in a vital spot. He started to say something and then seemed to think better of it. Joe continued his tirade:

"Every word I say simply confirms your estimate of me. Sure, I am a numbskull. If I wasn't, I would have listened to Mom long ago. But that doesn't mean that I am going to be an ass for the rest of my life."

The Old Man quit shining his knob and was now stroking his chin. Joe knew this was a hopeful signal. He always did that just before he signed an order or handed out a raise. Joe came up with a fast one:

"Mister Daub, when you make out that check I hope you will take several things into consideration. Seven years ago you told me I could have two weeks vacation each year. In all that time I have had only four days off. Each year at vacation time while you bent over backwards to give all the employees a break, I was the one who suffered. I pinch hit for nearly every one in the building."

The Old Man's jaw dropped but Joe did not give him a chance. He came up with another fast one:

"Mister Daub, if you will look over the payroll records, you will see that many of the employees under me usually drew more dough, with their overtime, than I did. Yet you expected me to be here ahead of them, lay out their work, be responsible for their production and be here after they were gone. I guess you thought my social status—that's what Oscar called it—meant more than dough. But, that social status never bought a new dress for Mom."

Joe headed for the door. The Old Man hustled across the room and grabbed him by the arm. His voice was husky. He said,

"Joe, come in tomorrow at noon for that check. It will be a good one. Then take two weeks vacation. When you come back, we will start all over again. In the meantime, while you are gone, we will fix a new office for you with your name on the door."

"Does the sign painter's bill come out of my pay?" asked Joe with a grin. The boss shoved him out into the hall. Then Joe thought he would run all the way home to tell Mom about it.

(*To Be Continued*)

(*Editor's Note*—This is the fourth leaf in Joe Bloe's Note Book. Here he has been studying the meanings of several terms used in making graphs and charts. Joe fully intends to express production figures by means of charts (something he has never done) so that they will be readily grasped by Daub.)

JOE BLOE'S NOTE BOOK—4.

Oscar said not to be scared about some of the big words. Looks as if he is right. Grampa said, "From a distance, a small hill looks like a mountain." After you get the hang of something it seems easy. Things least understood are always mysteries.

FACTS—*The truth about anything with all imaginative and circumstantial evidence removed.*

(I guess that means just what it says. I gotta get rid of the skin off the hot dog to get at the meat. No more of, "they said", or "it seems to me". Only way to get at the bottom of anything is to let people talk, just like the spring unwinding in a clock. People seldom say just what they think or give the real reason for doing something.)

GRAPHIC COMPARISONS—*Pictures or charts to show a mass of figures in a simple way so the meaning can be grasped quickly.*

(Now I know what that ancient Chink meant when he said: "One picture is worth ten thousand words." I guess I was just copying some of John Donkey's everlasting detail when I made that tabulation on the brooms for the Old Man. At the proper time I'll knock his eye out. I'll give him a lulu or break a leg in the attempt.)

AUTISTIC SCHIZOID COMPONENTS—*Elementary units of imagination related to one's self.*

(Wow! That one takes the cake. Just a classy way to cuss a guy and call him a "wishful thinker or dreamer" without his knowing what you mean. Just like when I day dream I am the Bigshot and then fire everybody I don't like—including the Old Man.)

HOMOGENEOUS DATA — *Composed of the same basic units.*

(That's simple enough. That just means you can't add brooms and scrub brushes without explanation. But, you can group brooms and scrub brushes and call the total "Cleaning equipment". And, if I want to, I can take the number of janitors, the number of brooms they have, then throw in the number of square feet they have to clean. That would be homogeneous data because it is concerned with the same thing. I could work in their pay rate, too, and the hours they work. Guess I could work in the number of times the Old Man lands in the office with a grouch on and gives the janitors hell.)

STATISTICAL VALUES — *Factual answers to any problem presented in a meaningful way.*

(Heck, that just means the right answer in figures or charts. Instead of saying to the Old Man, "Gorie is drunk again", I can give him figures to show him how many times he had a load on in the past year. Or I can make a chart to show, by comparison with the other employees, that Gorie was drunk more than all the other employees put together.)

NAPE Elects Officers By Mail Election

Fred W. Miller, Supervisor of the Masonic Home School of Printing, Fort Worth, Tex., has been reelected president of the National Association for Printing Education for 1943-1944 by mail ballot of the membership. Also reelected was Harold G. Crankshaw of Central High School, Washington, D. C., as vice president. James W. Loop, head of the department of printing at Charleston (W. Va.) High School, was elected treasurer.

Reelected to the Board of Directors were: George T. Hart, Benjamin Franklin High School, Rochester, N. Y., representing Dist. 1; Everett V. Harris, J. C. Murphy Junior High School, Atlanta, Ga., for Dist. 5; W. R. Baker, Stout Institute, Menomonie, Wis., for Dist. 7; Harold E. Sanger, Chicago School of Printing and Lithographing for Dist. 9; Fred W. Miller, Fort Worth, Tex., representing Dist. 11; E. B. Harding, South Dakota State College at Brookings for Dist. 13; and Allison J. McNay, Los Angeles California Schools, for Dist. 15. Joseph B. Coyle, Johnstown Pennsylvania High School is newly elected representative for Dist. 3.

Printing Patents for the month

covering period from August 24 to September 21

This data is compiled exclusively for *Printing Equipment Engineer* by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading for the dates specified.

For copies of patents listed here, specify the patent numbers and send 10c for each separate patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating:

2,327,646. PAPER PUNCH for punching a selected number of holes in a quantity of sheets of paper. A longitudinal punch block has two lengthwise rows of studs and grooves, each row with different sized apertures for punching different sizes of holes. The studs are normally held above their grooves by set springs and are actuated by a series of cams positioned on a square shaft supported in the punch side members and rotated by pressure on a lever-handle. The cams are so placed on the shaft that only one pair of them is brought in punching contact at a time by a degree of rotation of the lever-handle, further pressure on the handle causing additional pairs of holes to be punched. Thus less pressure is required to operate the punch. The cams are held on the shaft by set screws so they may be moved out of alignment to regulate the number of holes to be punched. Invented by Charles Hutchinson, Kamloops, British Columbia Canada. Unassigned. Application June 9, 1941. 1 claim.

2,327,941. COIL BINDER OF SYNTHETIC RESIN of the type previously made of coiled wire for the binding of a plurality of sheets having uniformly spaced perforations in their marginal portions. Whereas the wire coils were generally "open wound," i.e. with open spaces between adjacent spirals conforming to the spaces between adjacent perforations, the resin coil may be tightly wound. Hence the resin coils may be stored without becoming interwoven and tangled. Further, when the leading end of the reson coil is pulled out and inserted through the first perforation, the remaining coil may be wound or rotated into place as heretofore but the slight contractive tension prevents subsequent creeping and movement. Invented by Rudolf Tauber, New York, N. Y. Unassigned. Application December 19, 1942. 5 claims.

2,329,786. ALL-PAPER LOOSE-LEAF FOLDER CONSTRUCTION which uses card board fasteners in place of metal binders, in line with present efforts to conserve metal. A paper board folder is faced on the inside with a paper board backing and binder element embodying three or four tongues to pass through slots in the paper to be bound. The tongues have a number of fold lines pressed into them so they fold into a hollow rectangle the width of the binder's back and of a depth sufficient to accommodate the margin of the pages to the rear of the page slots. There are passages for the tongues either beneath the binder element or out around the back of the folder itself, thereby to hold the folder tongues in place. Also, one of the covers of the binder is provided along its outer edge with slots for conveniently marking extra paper for perforations to conform with the binder's tongues. Invented by William A. Ringler, Wayne, Pa. Assigned to The Gardner-Richardson Co., Middletown, Ohio. Application May 28, 1942. 7 claims.

2,329,890. MACHINE FOR CUTTING thick piles of rectangular printed sheets into piles of labels and the like. When the contours of printed labels are not to be rectangular, it has been customary to die-cut them involving marginal wastage. By means of the present invention rhombic labels may be printed on sheets of any size and in successive rows so that at the end of each row only a small triangular unprinted waste section is left. These sheets are piled and the rows are cut into row-piles having the small triangular unprinted sections at their ends. The row-piles are then turned angularly to the initial lines of cut so that the triangle waste areas assume step formation. Thereafter the waste triangles, which comprise the steps, may be removed by a single guillotine cut through the row-piles, removing the step-like ends as waste triangles and leaving flush ends oblique to the sides. The machine has an auxiliary back wall which slides on a gauge towards the knife so that successive cuts separate individual piles of rhombic labels, the last cut removing the waste triangles from the other end of the row-piles. Invented by William R. Fisher, Arlington, N. J. Assigned to Reynolds Metals Co., Richmond, Va. Application January 13, 1943. 8 claims.

Composing Room Equipment:

2,327,676. TREATMENT OF MEMBERS OF A LINOTYPE MACHINE by chromium plating them so dross from the type metal will not adhere to them. The chromium coating applied by the following process firmly adheres to the steel base at all times and under all working conditions. The metallic member is laced in a boiling cleaning solution, making it alternately cathodic and anodic while in the solution. After removal from the solution, the metal is rinsed making it anodic while in a sulphuric acid-glycerine bath. The metal is then plated with chromium by electrolysis in a chromic acid plating bath where the temperature is elevated, and then placed in a mass of slowly cooling molten material. Invented by James W. Spence, New York, N. Y. Assigned to Du-Repel Corp., Indianapolis, Ind. Application January 9, 1940. 3 claims.

2,328,097. TYPEWRITER-LIKE PRINTING MACHINE intended to comprise one of several units by which printed lines of relatively large character may be rapidly produced, the individual letters being 18 point to 60 point and spaced apart as though actually printed with printer's type so that the product is indistinguishable from the product of the printing press and may be used as a "proof" for plate making. Present application was a division of that which matured as patent 2,290,383. (See Printing Equipment Engineer for September, 1942.)

Whereas the claims of the prior patent dealt primarily with the mechanism for character selection, claims of the current patent deal with mechanism for proper variable spacing. This includes a serrated or notched rotary wheel which gauges the movement of the control elements by rotating for a spacing operation to an extent limited by the depth of a slot corresponding to the width of a character. Invented by Roswell S. Reid, deceased, Morgantown, W. Va. Assigned by Effie Roberts Reid, executrix, Morgantown, W. Va. to West Virginia Newspaper Publishing Co., Morgantown, W. Va. Original application April 29, 1938. Divided and this application December 30, 1941. 9 claims.

Feeding, Folding, Delivery:

2,327,377. PAPER FEEDING MECHANISM for imprinting machines for producing successive impressions at longitudinally spaced intervals upon continuous strips of stationery. Invention is described in conjunction with a conventional form of addressing machine but is said to be suitable to various forms of printing and recording apparatus. Present construction is a further development and amplification of the inventions disclosed in patents 2,095,292; 2,160,916 and 2,200,308. In lieu of the procedure of prior constructions, viz., advancing the continuous strip stationery downwardly from a supply in ele-

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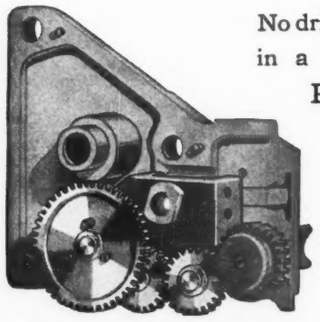

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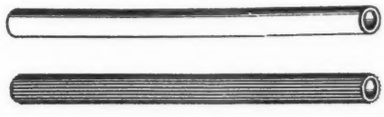

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vated relation above the imprinting devices and thence forwardly past the imprinting position and over the table to the front of the machine where it is engaged by a pin type feeding means, in the present instance the pin type feeding devices are located in juxtaposition to the imprinting devices and the supply of record material is drawn in reverse direction from the supply packet at the front of the machine rearwardly past the impression receiving position and is then elevated to a higher receiver or guide means for the imprinted material. It has been found that by so locating the feeding units in close relation with the imprinting position, greater accuracy is assured. Invented by John Q. Sherman and Albert W. Metzner, Dayton, Ohio. Assigned to Sherman, deceased, Katherine M. Sherman, William C. Sherman, and Wellmore B. Turner, executors of John Q. Sherman. Application June 5, 1939. 10 claims.

2,327,689. COLLATING MACHINE for interleaving a plurality of paper and carbon webs so that successive or adjacent paper webs will be aligned both transversely and longitudinally to cause printed forms appearing on the webs to be arranged in proper register for making a number of copies of an original sheet. A continuous line of adhesive is applied to the under side of each of the paper webs, whereby the carbon webs are caused to adhere to the paper webs and the paper webs to each other, although the carbon web is accurately aligned upon the paper web to permit a predetermined margin along both edges of the paper web which is free of carbon. The paper is withdrawn from the machine by a drum having its diameter variable to change the length of web fed from the machine to permit a different length cut-off sheet to be made by the cut-off means. Invented by Clayton E. Wyrick, Dayton, Ohio. Assigned to The Egry Register Co., Dayton, Ohio. Application October 21, 1940. 32 claims.

2,327,832. WEB WINDING APPARATUS for a coated web of paper, particularly photographic film but not limited thereto. The wind-up roll is driven by contact with a driving cylinder which at the beginning of the winding is caused to bear more heavily on the wind-up roll than when the latter has grown larger, thereby to obviate initial slipping and unevenness and later buckling due to the accumulated weight of the paper and pressure against the driving roll. Also the wind-up roll is rocked to achieve even winding. Both driving cylinder pressure and wind-up roll rocking is provided by mounting the wind-up roll in a frame jacked by a fluid operated cyln der. Invented by Carl P. Vogel, Rochester, N. Y. Assigned to Eastman Kodak Co., Rochester, N. Y. Application December 30, 1941. 4 claims.

2,328,814. CUTTING AND FOLDING MACHINE intended particularly for handling textile material such as gauze, for example in fabricating surgical sponges, but which may also be utilized for cutting and folding paper for diverse other purposes. The web of material moves at constant speed, without stopping or starting, around a rotating drum having a plurality of folders about its periphery. The material is pressed and stretched by rollers against the folders and a cutting mechanism operates between the folders to sever a predetermined length of material applied to the folder. Thereafter the folded severed lengths of web are removed from the folders. Invented by Alfred Laukhuff, Milwaukee, Wis. Unassigned. Application August 20, 1941. 21 claims.

2,328,943. MECHANISM FOR FEEDING SHEETS, particularly sheets moving in lapped relation, to a printing press. One or more suckers, suction of which may be regulated, are mounted above the feed board and arranged to drip the leading portion of each sheet in turn as it approaches the front guides. The sucker moves the sheet until its front edge reaches front guides, releases the sheet by a sliding and upward motion and returns to original gripping position. The forward end of the sucker is adapted to rest upon the feed board during its back and forth travel and the rear end of the sucker is raised slightly above the feed board in order to admit the forward edge of a sheet. Thereby the sheet may be slowed down in its forward travel by suction as it closes the suction orifice and by relatively slow movement of the sucker. Invented by Headley Townsend Backhouse, London, England. Unassigned. Application April 17, 1941. 6 claims.

2,329,353. APPARATUS FOR FOLDING BLANKS of paperboard for making boxes, cartons, etc. Angular or diagonal flaps are made wherein the fold can be made without the necessity of supporting the marginal portion of blank. A folding force is applied against an edge of the blank in a direction toward the line about which the blank is to be folded to deflect the edge and adjacent portion of the blank, out of the plane of the remainder of blank, whereafter the movement of the edge away from the plane of blank is positively halted, which "breaks" or folds the blank along a predetermined line of fold. Thereafter the folding force is continued to complete movement of the folded portion of blank about the line of fold. Invented by Leon E. La Bombard, Nashua, N. H. Assigned to The International Paper Box Machine Co., Nashua, N. H. Application February 7, 1940. 16 claims.

2,329,469. SLITTER ROLLER to be located preferably in the web run between a conventional rotary printing unit and conventional turner bars. Each roller engages one or more conventional slitter discs to cut the web into two or more ribbons which are separated and guided through separate paths of travel to the folder or discharge terminal. Roller of the present invention is made of sufficient rigidity to resist deflection without a mid-point support. This is accomplished by a construction including a plurality of tubular sections and one or more stiffening members each supporting a composite cutting ring that cooperates with a slitter disc. Invented by William F. Huck, Richmond Hill, N. Y. Assigned to R. Hoe & Co., Inc., New York, N. Y. Application December 8, 1942. 12 claims.

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Miscellaneous:

2,327,530. EJECTOR FOR SLOT-CUTTING DIES for removing the strips severed from a piece of cardboard in the operation of forming deep, narrow slots or notches in a marginal portion of the cardboard. A resilient wire is used as a spring, one end screwed down and the other end parallel to the upper edge of the rules between which it lies and normally projecting above them. When a piece of cardboard is forced down to cut it, the free end of the wire also moves down and, as soon as pressure is released, the wire moves up again and raises the little strip of cardboard out of the dies. It is immaterial how narrow the slot is, because the free end of the spring may be flattened vertically to its line of movement so as to permit it to lie between rules spaced only a small distance apart. Invented by Jesse D. Klopfenstein, Chicago, Ill. Assigned to Colorgraphic Incorporated, Corp. of Illinois. Application November 18, 1942. 5 claims.

2,328,380. ONE-PIECE POST CARD AND ENVELOPE suitable for insertion in magazines for new subscriptions, renewals, etc. The envelope face has a large upper flap, a large lower flap and a narrower marginal flap on the right. The extending post card on the left is folded over back of face of envelope and may be detached at line of perforation where it joins envelope. The upper border of upper flap and two side borders of the lower flap are gummed and fold over post card which is folded back of envelope to prepare envelope for mailing. Invented by Emanuel Feder, Newark, N. J. Unassigned. Application August 30, 1941. 1 claim.

Plate Making:

2,327,380. FLEXIBLE, PAPER-BASE, LIGHT-SENSITIVE ELEMENT adapted to be formed into a photographic negative. Present invention provides a translucent, water-repellent sheet material which replaces rigid glass and, while flexible, will resist stretching or shrinking when immersed in liquids such as aqueous suspensions of the type resorted to in the development of photographic negatives. Result is obtained by combining water-repellent layers with the paper in such manner that the developing liquids are prevented from coming into contact with the paper and yet flexibility is preserved. A kraft paper is first impregnated with slightly water receptive polyvinyl alcohol which prevents more than surface impregnation of an over-layer of water-repellent "Plaskon" or "Casco," thus preserving the natural flexibility of the paper. To this is applied a translucent coating such as sodium silicate or albumen to provide a suitable surface for a final coating of

a light-sensitive emulsion as for example gelatine and a silver haloid, after which the coated paper may be dried and arranged in sheets or rolls. The intermediate translucent coating between the water-repellent and light-sensitive coatings is found especially advantageous. Invented by William Craig Toland and Ellis Bassist, Brookline, Mass. Assigned to William C. Toland, trustee. Application November 13, 1941. 6 claims.

2,327,422. RUBBER-LIKE GEL COMPOSITIONS for use in a printing roll or plate for transferring ink from a source of ink to surfaces to be printed. The compositions stand up under the solvent action of mineral oils, under continued contact with printing inks, by which they are uniformly wetted, and are said not to soften at temperatures up to 225°—275° F. The compositions, of which many examples are given, may be poured into molds or matrices to form rolls or plates, and then cooled. Generally the composition consists of a material selected from the group consisting of polymerized vinyl chloride, polymerized vinyl acetate and copolymers of vinyl chloride and vinyl acetate and a normally liquid organic condensation product selected from the group consisting of organic condensation reaction products of formaldehyde and turpentine, formaldehyde and pinene, formaldehyde and terpineol and formaldehyde and pine oil, the material being dissolved in the organic condensation product. Invented by Mortimer T. Harvey, East Orange, N. J. Assigned to Harvel Research Corp., Corp. of New Jersey. Application March 30, 1940. 13 claims.

2,327,828. ANTI-HALATION BACKING for photographic film and plates which prevents reflection of light rays from the support to the light-sensitive material and thereby prevents consequent fogging. Colloidal carbon or carbon black is finely divided in a coating solution which may be diluted with organic liquids to proper coating consistency and which dissolves smoothly in photographic developers without disintegrating and contaminating the developer. The solution, with carbon particles dispersed by a high viscosity milling technique, consists of a water-insoluble, alkali-soluble material such as an alkali soluble cellulose ester or synthetic resin. Invented by Norwood L. Simmons, Rochester, N. Y. Assigned to Eastman Kodak Co., Rochester, N. Y. Application March 26, 1941. 10 claims.

2,328,371. DEEP ETCH LITHOGRAPHIC PLATE PREPARATION, the application for this patent being a continuation of that issued December 9, 1941 as patent 2,265,829. (See Printing Equipment Engineer for January, 1942.) In the present process a plate surfacing of a water-soluble colloid other than gum arabic is used. For instance there is applied a surfacing of ammonium arabate and egg

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Duplex Printing Press Co., The, Battle Creek, Mich. (No Zone.)

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Harris-Seybold-Potter Co., 4510 East 71st St., Cleveland **5**, Ohio.
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2,328,480. PAIR OF REGISTER RAILS which assure identical positioning of two or more negative plates of a series upon a sensitized surface or metal plate as they are exposed thereto in proper sequence so that the images photographically reproduced upon the metal plate will have the same position as they had when stripped and laid upon the various superimposed negative plates during the make-up operation. Example is the production of an illustration using combined half tones and line images. Each register rail has two side contacting points and one plate corner guide. One register rail also has an attached flat undermember providing a side and top guide for the metal plate. Negative plates with irregular edges may be perfectly registered by use of the invention without dependency on eye observation of register marks by the operator. Invented by Clement A. Mawicke, Wilmette, and Harold W. Olsen, Chicago, Ill. Assigned by Harold W. Olsen to Clement A. Mawicke. Application March 9, 1942. 9 claims.

2,330,002. RUBBER PRINTING PLATE which permits exact positioning on a press to give hair-line register in multi-color work. A metal photo-engraving, produced in the usual way, is drilled with holes at the center of its register marks. The plate is then placed upon a molding plate and the holes employed to guide the forming of similar registering holes therein, after which the photo-engraving plate is removed and, through the lines of the registering holes in the mold, three spaced and deeper holes with conical ends are drilled. These holes in the mold are eventually used to form pre-registered projections on the backing sheet of the plate. Between this backing sheet and the printing plate surface formed by a matrix, there is bonded a non-shrink sheet to provide a laminated structure which obviates shrinking and stretching. Invented by Franklin Moss, Hollis, and John F. Kirby, Jr., Brooklyn, N. Y. Assigned by John F. Kirby, Jr. to Franklin Moss. Application March 7, 1941. 9 claims.

Printing Inks and Related Chemicals:

2,327,405. VAT DYESTUFF PRINTING PASTE made by incorporating in the ingredients iron phthalocyanines or their derivatives indigoid or thioindigoid, carrying as substituents water-solubilizing groups, for example sulfonic acid or carboxylic acid groups. Cotton goods are printed with the paste, dried and aged for 3 to 5 minutes in an ager, rinsed in water and oxidized with sodium bicarbonate and acetic acid. The improved printing paste fixes more rapidly, resulting in a print of greater depth. Invented by Alfred Davidson, Ernest Chapman, Simon Thompson McQueen, and Joseph Payman, Blackley, Manchester, England. Assigned to Imperial Chemical Industries Limited, Corp. of Great Britain. Application March 13, 1940. 5 claims.

2,327,426. PROCESS FOR COLORATION OF CELLULOSE ACETATE materials in which printing may be used to impregnate the material. Cellulose acetate or other cellulose ester or ether materials are colored by forming an azo dye on the materials. A diazotised aryl-azo aniline having a nitro group in the aryl nucleus is coupled with a primary aromatic mono-amine of the benzene series which is free from nuclear hydroxyl groups and which couples in para position to the primary amino group. The material is impregnated by padding or printing with the nitro-aryl-azo anilines and then aged or steamed to cause the dye to enter the material. Invented by Kenneth Ronald House and Henry Charles Olpin, Spondon, near Derby England. Assigned to Celanese Corp. of America, New York, N. Y. Application May 14, 1940. 5 claims.

2,327,472. METHOD OF PREPARING PHTHALOCYANINE PIGMENT useful in lacquers and inks. Aluminum benzoate is intimately mixed with the phthalocyanine in the wet state in such proportions to prevent any substantial appearance of flocculation with degradation of color in coating films containing the pigment. Invented by Vincent C. Vesce, Ridgewood, and Ferdinand M. Stalzer, Haledon, N. J. Assigned to Harmon Color Works, Inc., Haledon, N. J. Application January 3, 1941. 13 claims.

2,327,594. NON-OFFSETTING TUNGSTATE-PIGMENT PRINTING INK having high water tolerance so it will not set up on the press. After printing, the printed film may be treated with water to form a hard non-offsetting surface thereon. Tungstated pigments are resinated in the pulp state with a rosin or a terpene hydrocarbon of the formula $C^{10}H^{16}$ such as alpha terpinene, modified with an alpha beta unsaturated organic polybasic acid such as maleic or fumaric. The pigment is mixed with a sodium soap or alcohol solution of the resin, equal parts resin and pigment by weight on a dry basis used. The resin is then precipitated, the resinated pigment dried and ground. The resinated pigment is incorporated in a varnish of half by weight of diethylene glycol and half modified rosin or terpene hydrocarbon as used in resination of the pigment. Ink of this composition is said to stay workable a longer time. Invented by Donald Robert Erickson and Paul J. Thoma, Kalamazoo, Mich. Unassigned. Application August 11, 1941. 2 claims.

2,327,595. ALKALI BLUE PIGMENTS, and inks using them, processed like the tungstate pigments and inks therefrom described in patent 2,327,594 (see above). In addition to having the characteristics of that ink, alkali blue ink produced by this method has its usual "blue bronze" materially reduced. Invented by Donald Robert Erickson and Paul J. Thoma, Kalamazoo, Mich. Unassigned. Application August 11, 1941. 2 claims.

2,327,596. IMPROVED MOLYBDATED PIGMENTS and inks made therefrom having the same characteristics and the same composition and production steps as the inks of the foregoing patents, 2,327,594 and 2,327,595. The molybdated pigments have their characteristic dirty color cleared up by the resination. They are selected from the group consisting of malachite green, methyl violet, auramine, Victoria blue, rhodamine and brilliant blue. Invented by Donald Robert Erickson and Paul J. Thoma, Kalamazoo, Mich. Unassigned. Application August 11, 1941. 2 claims.

2,327,597. IMPROVED TANNATED PIGMENTS and inks made therefrom by the methods described in the foregoing patents and having like characteristics. The pigment is selected from the same group as that of patent 2,327,596, above. Invented by Donald Robert Erickson and Paul J. Thoma, Kalamazoo, Mich. Unassigned. Application August 11, 1941. 2 claims.

2,327,984. PRODUCTION OF LACQUERS useful in printing inks, lithographic inks, roller coating enamels, etc., which have a high degree of compatibility with petroleum thinners, fatty oils, especially drying oils, drying oil varnishes, etc. An example is (per parts by weight): Urea (1 mol) 60 parts; Formalin (37% formaldehyde in water) (2.3 mols) 186 parts; Phosphoric acid 0.6 parts; 2-ethyl hexanol 120—180 parts; Methanol 60—90 parts. A mixture of the urea, formalin, acid, about one half of the 2-ethyl hexanol and the methanol is placed in a still provided with an agitator and heated to the boiling point. The quantity of methanol may be varied. When distillate has the required dry methanol (after distilling off wet methanol) the balance of the 2-ethyl hexanol is added. Distillation is continued until the boiling point reaches about 100° C. when a vacuum is applied and gradually increased to 26 inches of mercury vacuum (3—4 inches of mercury absolute pressure). Distillation proceeds at about 90° C. gradually rising to about 100° C. toward end of process at which time only 1—2% of methanol remains. Invented by Herbert J. West, Stamford, Conn. Assigned to American Cyanamid Co., New York, N. Y. Application August 3, 1940. 5 claims.

2,328,534. MOISTURE AND VAPOR PROOFING COATING COMPOSITIONS for lithographed labels, cellulose acetate, and kraft papers. The coating contains a cyclized rubber stabilized by para benzyl amino phenol. Various examples of the coating suitable for various packaging papers, etc., and for coating rubber hydrochloride sheet, etc., are given and these may contain as plasticizers or modifiers: Castor, palm, mineral oils; paraffin, glyceryl monostearate and hydrogenated fatty acids; ester and dammar gums; Vinyl acetate, dibutyl phthalate, etc. Addition of metallic soaps makes a scuff resistant coating good for printed or lithographed tin can labels. Invented by Clarence M. Carson, Cuyahoga Falls, Ohio. Assigned

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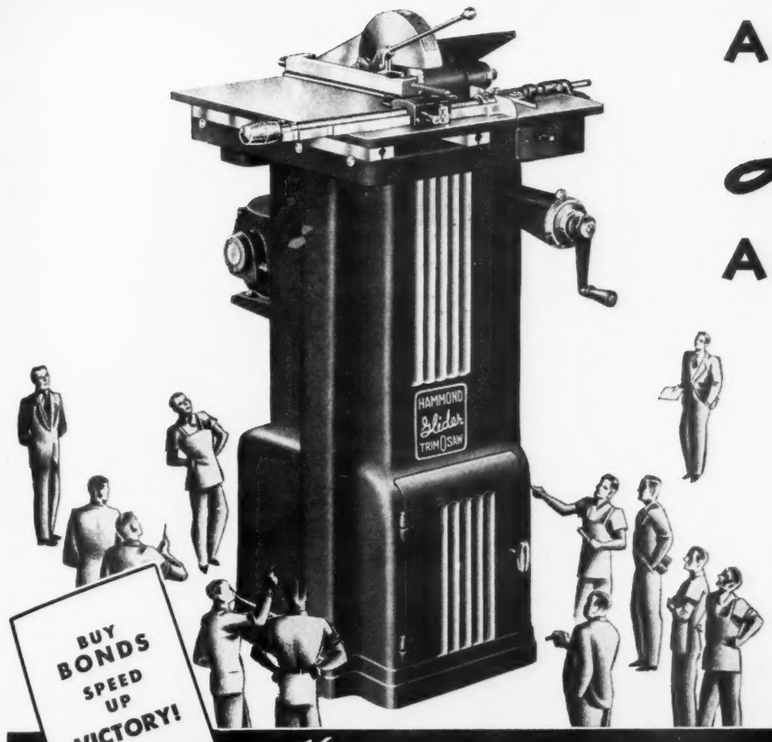

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to Wingfoot Corp., Akron, Ohio. Application December 30, 1939. 2 claims.

2,328,621. TREATMENT OF FATTY OILS of animal and vegetable origin useful as drying oils in the manufacture of printing inks and lithographing varnishes. The oils such as linseed oil and perilla, corn oil, cottonseed oil, castor oil, sesame oil and colya oil are treated to produce, by commercially practicable means, a light distillate consisting of completely saturated molecules and a residue comprising highly unsaturated molecules. The oil is mixed with 10% or more petroleum wax of a melting point of at least 120° F. and heating it to a temperature between 400° and 850° F. to produce by destructive distillation a fraction equal to from 10% to 80% of the original oil comprising light saturated molecules and a residue of heavy unsaturated molecules. Invented by Charles E. Crawford, Cos Cob, Conn. Unassigned. Application February 12, 1942. 5 claims.

2,328,734. ARYLAMIDES OF HYDROXY NAPHTHOIC ACIDS useful in textile printing. Amines which are 4-amino-2:5-di(beta-acetoxyethoxy)-antilides of benzoic acid and phenoxy-acetic acid, which acids may carry alkoxy or halogen nuclear substituents, are condensed with 2:3-hydroxy-naphthoic acid or a reactive derivative thereof, and hydrolyzed to produce the corresponding 2:3 hydroxy-naphthoic-2.:5.-di (beta-hydroxyethoxy)-anilides which are reactive towards diazo compounds. The coupling compcnents possess small affinity for fiber, and can be easily washed out. Invented by Geoffrey Jones Marriott and Kenneth Herbert Saunders, Manchester, England. Assigned to Imperial Chemical Industries Limited, Corp. of Great Britain. Original application December 21, 1939. Divided and this application January 29, 1941. 5 claims.

2,328,922. PROCESS FOR PREPARING VINYL ALCOHOL-METHACRYLIC ESTER COPOLYMERS useful in printer's inks and other applications where a resinous binder for pigment is desired. Vinyl ester and a methacrylic ester are copolymerized in a water miscible organic solvent. The copolymer is precipitated from the resulting solution by the addition of water. The copolymer is then separated from the solvent and water and treated in an organic solvent containing water and an alkaline hydrolysis catalyst to hydrolyze the vinyl ester units. The solution is acidified and the vinyl alcohol-methacrylic ester copolymer is precipitated by the addition of water. Invented by Harry T. Neher, Bristol, and Edwin H. Kroecker, East Oak Lane, Pa. Assigned to Roehm & Haas Co., Philadelphia, Pa. Application June 13, 1939. 6 claims.

2,329,364. MANUFACTURE OF IRON BLUE PIGMENTS useful in printing inks, lacquer, etc., which has a high resistance to the action of alkalis, even caustic soda. Ferrous sulphate, ammonium sulphate and sulphuric acid are dissolved in water at about 30° C. A free sodium sulphate in aqueous solution is added thereto. The solution is reacted with an aqueous solution of sodium ferrocyanide forming a white precipitate. The temperature is raised to about 75° C. and an aqueous solution of cobalt chloride is added. The mass is oxidized with sulfuric acid and sodium chlorate. Invented by Paul A. Thomasset, St. George, Staten Island, N. Y. Assigned to Ansbacher-Siegle Corp., New York, N. Y. Application September 4, 1941. 2 claims.

2,329,365. MANUFACTURE OF ALKALI RESISTING IRON BLUE PIGMENTS, similarly as described in patent 2,329,365, above. A mixture of nickel sulphate and cobalt chloride is substituted for the cobalt chloride of the other patent. Invented by Paul A. Thomasset, St. George, Staten Island, N. Y. Assigned to Ansbacher-Siegle Corp., New York, N. Y. Application December 17, 1941. 4 claims.

2,329,663. COATING COMPOSITION containing manila resin and melamine-formaldehyde useful in production of printing inks as well as insulating materials by impregnating cloth and paper therewith, and in the manufacture of paints and lacquers. Fillers and pigments such as lithopone, zinc oxide, mica, powdered silica, glass fibers and ground glass may be used. The melamine-formaldehyde resin is alkylated with an alcohol containing at least 4 carbon atoms. The molal ratio of formaldehyde and melamine is 2.5:1. The weight ratio of manila resin to melamine resin is from 9.1 to 1.9. Invented by Robert C. Swain, Riverside, and Pierrepont Adams, Stamford, Conn.

(*Continued on Next Page*)

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Assigned to American Cyanamid Co., New York, N. Y. Application November 26, 1940. 4 claims.

Printing Presses and Equipment:

2,327,695. STATIC ELIMINATOR for discharging the static developed on paper when passing through a printing press. A high tension current charges a number of discharge points on a bar extending transversely across the paper as it runs through the press. Instead of the electrode in the bar being made from a conducting wire set within an insulating rubber tube as heretofore, present invention makes use of a glass mercury vapor tube. This is said to provide the same effect in the production of required electrons, but has no rubber to deteriorate. Invented by Theodore John Beregh, Patchogue, N. Y. Unassigned. Application October 2, 1940. 2 claims.

2,328,183. APPARATUS FOR COATING A CONTINUOUS WEB OF PAPER, provided with a flexible surfaced paper carrying roll contacting a fountain, open only on the roll side and forming with it an applying chamber. Two or more fountains may be used for coating both sides of the web. The fountain has a back and adjustable sides, or dykes, so the width of the coating may be controlled. A doctor blade along the edge of the open side of the fountain is adjustable for different thicknesses of paper and of coating to be applied and has a sponge rubber blanket beneath it and a rigid member under the elastic blanket to hold it to the doctor blade. Invented by William Barrett, International Falls, Minn. Assigned to Minnesota and Ontario Paper Co., Minneapolis, Minn. Application May 4, 1942. 8 claims.

2,328,586. PRINTING PROCESS AND APPARATUS to facilitate the use of resin bonded colors, particularly in textile printing where some color may be driven completely through the interstices of the cloth to reach the backing surface. Resin bonded colors, in contrast to direct vat or basic dyes, immediately emulsify on the blanket and cannot be removed by present blanket washers. Hence the resin solvents may soften and destroy the rubber impregnation of the blanket and the resin may cure in the dryers to a hard brittle skin. To prevent this, the present invention provides means for removing resin bonded colors from blankets. This is accomplished by applying to the blanket (or tympan or draw sheet) a temporary coating which receives the surplus ink and which is stripped from the surface, preferably after each printing, and a fresh coating immediately applied. Thus a continuously fresh surface is maintained on the impression cylinder which never carries ink into the "bite" to lay color on the goods to produce offset. Invented by William C. Ross, Winchester, Mass. Assigned to Dewey and Almy Chemical Co., North Cambridge, Mass. Application February 12, 1942. 9 claims.

2,328,909. METHOD OF VULCANIZING RUBBER SHEET MATERIAL such as printers' blankets. The belting is passed through the vulcanizing path and stopped near the start of the path. The portion that is stopped at this point is semi-cured by the application of heat and mechanical molding pressure. While under longitudinal tension, a part of the portion of belting previously semi-cured is festooned. The belting is continuously passed from the festooned supply through the remainder of the vulcanizing path. At least part of the continuously moving portion of the belting is subjected to superheated steam at atmospheric pressure to complete the cure. Invented by Karl B. Kilborn, Akron, Ohio. Assigned to Wingfoot Corp., Akron, Ohio. Application September 18, 1941. 9 claims.

2,328,990. INK FOUNTAIN with a roll mounting wherein metals of different coefficient of expansion may be employed for the roll and fountain body without the bearing joint seals being adversely affected by temperature changes. Leakage of ink into and through the roll bearings is prevented with aligned plain bearings with the journal portions of the roll having the same diameter as the roll itself. The journal portions of the roll have circumferential grooves and split expansion rings mounted in the grooves for contacting the bearing surfaces. Invented by Henry F. Meyer, University Heights, Ohio. Assigned to Harris-Seybold-Potter Co., Cleveland, Ohio. Application June 27, 1942. 8 claims.

2,329,152. NEW METHOD OF APPLYING THE "COLD SET" PRINTING PROCESS, using thermo-fluid inks, to high-speed newspaper printing with web speeds of 600 to 1,500 linear feet per minute. In practice more difficulties were experienced in applying the process to these high speed presses than to magazine or other presses of the carriage type. Solid ink tended to scrape off the web during its passage over angle bars and folders, causing streakiness; print tended to stick to the second impression cylinder; also roughness and tackiness of the print caused some sticking together of sheets hampering folding and distribution. Present invention overcomes these difficulties by using ink of much greater thermo-fluidity both by altering the characteristic of the ink and by heating it to a higher temperature, thereby enabling print films to flatten out. Then the fresh ink film is chilled by a water-cooled roller. Further, a suitable water-oil emulsion is sprayed through atomizing nozzles on to the impression cylinder of the second impression to protect the ink film of the first impression and keep it from sticking. A roller with a pile surface of plush contacts the sprayed cylinder to uniformly distribute the fluid, and evaporation of the fluid aids in keeping the cylinder at a suitable low temperature. Invented by Frank G. Breyer, Wilton, Conn. Assigned to J. M. Huber, Inc., New York, N. Y. Application July 11, 1940. 21 claims.

2,329,454. PRINTING MACHINE wherein the transfer rollers and plate cylinders of each printing assembly can be moved away from the impression cylinder not only for the purpose of facilitating threading of the machine but also so that the ink may be thoroughly worked up to the plate cylinder before actual printing is started. The invention relates to printing machines capable of being operated for multi-color or single color printing. An auxiliary drive is employed for driving when only one color is to be printed and this drive is automatically overhauled by the main drive when the machine is finally started in full operation. Invented by Edwin E. Burroughs, Rockaway Beach, N. Y. Assigned to Potdevin Machine Co., Brooklyn, N. Y. Application October 23, 1940. 2 claims.

2,329,830. IMPRESSION CYLINDER CONSTRUCTION for relatively large multi-color magazine rotary printing presses, particularly where the impression cylinder is three or four times the diameter of the printing cylinders. Previously such cylinders clamped only the leading edge of one or more underlying intermediate packing sheets leaving the trailing edge unattached and with a tendency to creep between the outer and inner sheets of packing in spite of their binding friction on the intermediate sheet. Thus injurious wrinkles occurred. Present invention avoids such wrinkles with an improved tympan clamping arrangement whereby the intermediate sheets of packing are clamped to the cylinder only at their trailing edge and being free to move at their leading edge except for the binding action of the outer sheet (and preferably also the inner sheet) clamped at both leading and trailing edges so as to be maintained taut. Invented by Curtis S. Crafts, Oak Park, Ill. Assigned to The Goss Printing Press Co., Chicago, Ill. Application October 24, 1940. 10 claims.

2,329,857. FLAME GUARD for the delivery end of a printing press whereby the gas flame commonly used is prevented from igniting a sheet of paper accidentally coming to rest over it or bouncing back from the hopper after it has passed over the flame. Present invention includes a shield which momentarily covers the flame after a sheet has passed over it and, at the same time, operates a gas control valve to diminish the flame during operation of the shield. Part of the mechanism which operates the joggers may be used to operate the shield. An additional guard prevents sheets from bouncing out of hopper and the top of this guard carries several star wheels which serve to contact the paper sheet and carry it over the guard without smudging if the sheet is printed on its under side. Invented by George B. Sammons, Washington, D. C. Unassigned. Application January 28, 1941. 12 claims.

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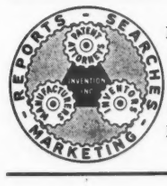

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Advertising Manager George Welp of International Printing Ink, Div. of Interchemical Corporation, has been elected a member of the War Advertising Council. He will represent the Graphic Arts Victory Committee which is affiliated with the Council.

"Extra-Curricular" ?s Answered at Cleveland Linotype Clinic

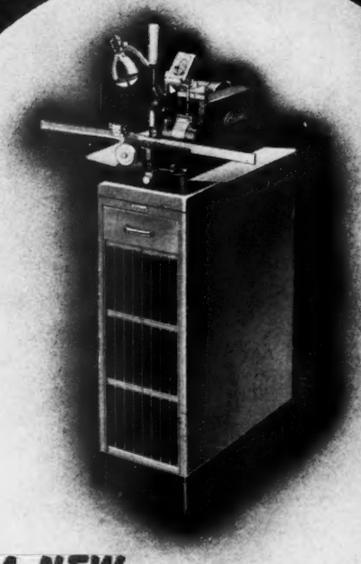
BELOW are printed a number of notes made at one of the Mergenthaler Linotype Co.'s mechanical clinics held recently in Cleveland. Some of the notes are "extra-curricular" in nature, the ideas being advanced from the floor by northern Ohio machinists and operator-machinists. Discussion was invited by "Professors" Martin Leonard and Carl Myers of MLCo's Chicago agency.

1 The "throw" of magazine escapement verge springs uniformly should be from 5/6 in. to 3/8 in. This tension is sufficient to return the verge to normal position after the verge has been rotated through a small sector of a circle to release a matrix.

2 After Carl Myers had explained the functions and adjustment of the assembler entrance, assembler itself, the assembler slide and the assembling elevator, some discussion arose relative to means for eliminating the trouble caused by matrices jumping out of the assembler. The principal considerations in preventing this trouble are to keep in mind that most of the assembler adjustments are interdependent upon each other. Particularly, the adjustment of the chute finger and the finger spring, assembler entrance guide No. 1 (which should be anchored in position on early machines), the assembler slide brake and return springs, and the assembler star pinion friction spring adjustments should be "synchronized". The assembler slide return spring adjustment should be checked first—then the star pinion friction spring adjustment can be made immediately afterwards. In many cases where the operator is bothered with matrices jumping out of the assembler, the trouble lies in a non-lubricated star pinion and friction disk. When dry, these two parts produce the effect of too strong star wheel tension when the star is delivering matrices into the assembling elevator. There really isn't any way in which to express the amount of correct tension on the average machine except to say that when a line of quad matrices can be assembled rapidly without slowing up the speed of the assembler star itself then the tension is correct. Judgment of tension can be learned by thrusting a finger against the assembler star while it is in motion. A rather severe test for the correct relationship of assembler adjustments can be made by assembling alternately thin space and cap W matrices. If the thin spaces do not jump out of the assembler, these adjustments are in satisfactory condition.

3 Some discussion arose from the floor relative to discarding assembler slide brake operating lever spring (D-1462). It's purpose is to hold the slide brake free of the slide itself to assure that the slide will have returned fully to normal position when the operator lifts the assembling elevator to the delivery slide. The action of seating the assembling elevator in normal position disengages the slide brake operating lever from the brake. Opinions expressed from the floor indicated that in some plants the spring is removed from the operating lever, the assembler slide mechanism functioning satisfactorily without the spring.

4 Discussion upon adjustment of the delivery slide indicated that expensive replacement of slide and delivery channel parts and matrices, not to mention lost production time will occur if the delivery slide is not adjusted properly. The three most important items are that the delivery slide return stroke adjustment should be made in such manner that the slide will not impinge against and move the spaceband box chute when the slide is returned to normal position. The delivery stroke of the slide should be rapid and should come to rest in waiting-line position *softly* so as not to eventually jar slide parts loose. The air cushion piston packing should be kept oiled at all times. It may be necessary to expand the leather packing with cloth washers between the packing ring and the leather packing to permit proper cylinder vent adjustment. If dry graphite instead of oil is to be used to lubricate the delivery slide, the slide and upper and lower tracks should be cleaned thoroughly of the oil. For a day or so after dry graphite is introduced as the lubricating agent,



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some attention may have to be given the removal of any gummy deposit caused by the old oil. The dry graphite is usually applied to the track by means of a compressible hand-gun.

5 Normally, the pressure exerted upon the metal pot crucible mouthpiece against the mold during the cast is approx. 800 lbs.

6 Careful explanation was made of the functions of the front and back mold wipers. Expression from the floor indicated that some oil is necessary in addition to dry graphite upon the back mold wiper. The front wiper, while saturated with gasoline, may have graphite rubbed into the felt pieces—the gasoline evaporating rapidly. In any event, the wipers should not be the means of contaminating matrices with oil. Use of a high-grade oil was stressed.

7 Inquiry was made from the floor as to what could be done to relieve the trouble caused by mold rubbing the vise automatic mold disk dog buffer screw, and inability to adjust the mold cam lever eccentric to secure proper forward movement of the mold slide. The one making the inquiry referred to a very old machine. It was suggested that the mold cam lever be removed from the machine and the hole for the mold cam roll eccentric pin be filled in and drilled in a new position perhaps 1/16 in. farther back to permit effective adjustment of the eccentric. A new pin (BB-269) and rolls (BB-70 and BB-136) are also in order. While the work is being done by the manufacturer, a utility lever can be placed in the machine.

8 While it is a common practice among machinists in the larger plants to remove the first elevator jaw front and back spring pawls while adjusting the second elevator transfer, it seemed that machine operators in the smaller plants do not follow this practice. The reason for removing the spring pawls is that they interfere with making accurate adjustment of the relationship between the first elevator jaw and the second elevator bar at transfer position. It was stressed that the tension of both pawls should be the same. This condition can be secured by flexing the pawl to prevent undue pressure against matrices. For instance, if the front jaw pawl exerts too much tension a depression will be worn in the rail of the back jaw just under the spring pawl. This depression will interfere with perfect transfer to the second elevator bar. The prime objective in securing any adjustment on the machine is to preserve matrix teeth.

9 One of the most important considerations in matrix distribution was brought out during the discussion on distributor adjustment. This was related to the level condition of the machine in relation to the distributor bar. When a machine is installed, the base can be leveled with a small level placed in two directions at right angles (front and back direction, and sidewise) by placing the level on the keyboard pedestal, or by placing the level on the planed surface top side of the mold gear arm at the left side of the machine (this latter surface is milled off for the Linotype metal feeder bracket). Then the level may be placed on top of the distributor bar for sidewise level condition. If the distributor bar rises slightly above level toward the clutch side of the distributor, matrix distribution will be improved. When the machine has been leveled as outlined above, the lower front matrix lugs will be caused to remain in contact with the lower distributor screw at all times. The level condition of the machine should be checked at infrequent intervals. Thin pieces of wood or short slug lengths may be placed under the base points to secure the level position of the machine.

Timken Notes

The Earle M. Jorgensen Co., distributors of Timken Graphitic Steel in Texas and Oklahoma have expanded activities to include sale of Graphitic Steel in Arizona and Southern California. Claude M. Livermore, long identified with West Coast tool steel distribution, has recently become associated with Jorgenson.

The Coulter-Sibbett Steel Co. has been appointed Arizona and Southern California distributor of Timken Graphitic Steels, according to the Steel and Tube Division, The Timken Roller Bearing Company. The office and warehouse are located at 1801 East Slauson, Los Angeles 11, Calif.

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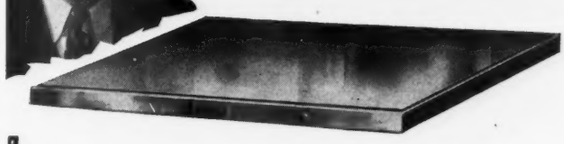

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INTERTYPE AUTOSPACER — *What to do when neglect of regular maintenance routine causes abnormal antics*

By RUSSELL G. JENSEN

SATISFACTORY operation of the Intertype Autospacer is dependent mainly upon keeping the device thoroughly cleaned and properly lubricated. The few adjustments that must be maintained are not difficult to make and rarely require attention.

No doubt there are some composing rooms in which time and other factors do not permit periodic cleaning to be done properly. The purpose of this article is to point out the results of such neglect and to suggest a remedy in each case.

Sometimes the vise jaws do not quad freely at center and flush right positions even after the jaws, the vise jaw rack and their paths of travel have been graphited.

The jaws may not fully close on the matrix line when quadding, or the jaws may not return to their normal position after the cast. In either case, see if the detent under the left-hand vise jaw is gummy or rusted. Clean the detent with a rag dampened with naptha and apply a small drop of light oil. Do not weaken the spring under the detent.

If the action of the vise jaws is still sluggish, it is probably due to the vise jaw rack gear shaft being gummy and dry. It requires only a few minutes to remove the entire line spread device, clean it with gasoline and apply a small quantity of light oil to the gear shaft. It is assumed that the vise cap guard (the squirt guard) is not bent and does not bind the jaws.

Another condition may exist in which the vise jaws quad freely, but occasionally do not quad at all, or quad too late to close fully on the matrix line, or quad too soon and pi the line. This is the result of the first elevator alignment stop bar not operating freely in its groove in the vise cap.

For example, the alignment stop bar is moved to normal position and is pushed too far to the left because the aligning holes in the bar do not register with the alignment stop bar detent ball on the vise cap. This throws the vise jaw release lever out of adjustment, positioning the lever too low for the first elevator jaw to trip the vise jaw release latch. Consequently, the vise jaws either quad too late or do not quad at all.

Likewise, when the alignment stop bar is moved to the extreme opposite position it may stick too far to the right. This puts the vise jaw release lever up too high and allows the vise jaws to quad prematurely.

To remedy the condition, the alignment stop bar must be removed and cleaned. The groove in the vise cap should be cleaned also. A wire buffing wheel is helpful in polishing the bar. Rub dry graphite into the sliding surfaces of the bar and into the groove. The aligning holes in the bar should snap freely into position under the detent ball.

It is advisable to check the setting of the vise jaw release fulcrum block at this time.

The adjustment that probably requires most frequent inspection is that of the vise jaw rack release stop. If the vise jaws close while the first elevator is starting its descent, the vise jaw release latch did not engage the stop after the previous cast. In this case, the stop should be adjusted to the right.

If a full matrix line does not enter the jaws freely with the control lever set at flush left or center, the stop may be adjusted too far to the right. This permits the right-hand vise jaw to close slightly before the line enters the jaws, producing the same effect as when sending in an overset line.

Caring properly for the Intertype Autospacer is not difficult, but a reasonable amount of time is required to do the job thoroughly. Where production requirements do not permit, the foregoing hints may prove helpful in eliminating front squirts and other needless annoyances.

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Electrotypers and Stereotypers Meet

The 46th annual meeting of the International Association of Electrotypers & Stereotypers held September 22 and 23, at Hotel Statler, Cleveland, was confined strictly to matters requiring annual attention of the officers and membership. More than 40 representatives were present.

Officers elected are: President, Harry G. Hoff, Chicago Electrotype and Stereotype Company, 350 East 22nd Street, Chicago, Ill.; First Vice President, James B. Love, the Cresset Company, 110 Greenwich Street, New York, N. Y.; Second Vice President, Dennis F. Hoynes, The Central Electrotype Co., 1760 East 22nd Street, Cleveland, Ohio; Statistician, George C. Scott, New England Electrotype Co., Inc., 470 Atlantic Avenue, Boston, Mass.; Executive Secretary, A. P. Schloegel, retained.

Hon. A. W. Giegengack, U. S. Public Printer, gave an interesting talk on the trials and tribulations in placing excess government printing orders. Mr. Giegengack was fullsome in his praise of the cooperation the G.P.O. has received from the electrotyping industry.

Executive Secretary Schloegel's report showed a substantial loss in the number of plants operating since January of 1940 —32 having been closed either by liquidation or consolidation. A gratifying feature of the suspensions is that only 4 of the closed plants were members of the International Association and 3 of the 4 consolidated operations with current Members. The International Association today represents a larger percentage of the industry than at any other time in its history.

The Secretary's report showed the surprisingly important part electrotypers are playing in the War Advertising Council campaign conducted in cooperation with the Magazine Publishers of America. All of the electrotypes used in the campaign are being donated by the industry. To date some 3100 plates have been pledged of which more than 2600 have been made.

After disposal of routine business, the matters of chief interest discussed were the various war time regulations under which the industry must operate today. While no solution was found to many of the problems, the delegates in attendance did receive a clearer picture of the industry's present status and what might be expected in the near future.

Quarterly Dividend

At the board meeting which followed the annual stockholders meeting of the Harris-Seybold-Potter Co., Cleveland, on September 21, the regular quarterly dividend of $1.25 a share was declared on the company's preferred stock, payable October 1, 1943, to stockholders of record September 22, 1943.

Photo-Lithographers

(Continued from Page 18)

post-war period. He enumerated them as follows:

(1) The Federal Government's encouragement of heavy-goods industry to manufacture quickly and abundantly all types of heavy machinery in order to provide employment for those men mustered out of the armed forces.

(2) The quantities of used litho equipment which may be dumped into the lithographic and letterpress industries.

(3) Easy credit terms granted to purchasers by manufacturers and dealers, thereby saturating the industry with inexperienced operators of litho plants with little or no business background.

Suggests Controlling Expansion for Good Effects

With respect to the immediate post-war situation, Mr. Soderstrom stated that with thousands of men coming back from overseas, and anxious to take up where they left off when they were inducted, the Government will undoubtedly encourage heavy-goods industry to get going as quickly as it can in order to give employment to these ex-soldiers.

"As business will have to be stimulated to some extent," he continued, "and in-

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creased purchasing encouraged, the Government might suggest installment selling, with low down-payments and long-time arrangements for payment of the balance.

"Such a condition might become demoralizing unless it were checked before its effects became widespread. Today there are only a few equipment manufacturers who make lithographic presses. There is no guarantee that these few will not be expanded before long. Is it not sensible, and the better part of wisdom, for those few who are in the market today to get together co-operatively and work out fair-trade practices concerning terms and conditions in selling new equipment that would benefit them and at the same time bring about a healthy financial condition within the industry?

Danger of Dumping Used Equipment

"There is no way of knowing how much second-hand equipment will be available when the war is over. However, there are plenty of signs that lead one to certain conclusions as to the condition of the second-hand market now and in the not too distant future."

Mr. Soderstrom pointed out that some of the factors that may affect post-war conditions. Second-hand dealers are steadily purchasing equipment and are offering it at attractive prices. It is a safe assumption that after the war second-hand lithographic machinery will be placed on the market to anyone who can make a small down payment.

He said there is another side to the picture which should give the forward-looking members of the offset-lith industry some anxiety. He referred to the thousands of multi-lith units installed in various government agencies that are now being used in prosecuting the war effort.

Then he asked: "The question now arises, What is the Government going to do with the vast quantity of lithographic equipment which it no longer needs? Will the Government try to sell this huge stock of machinery quickly to dealers at preposterously low prices? Or will the Government, realizing the disastrous consequences to our industry of such wholesale dumping, sell the machinery gradually over a period of two or three years?

Bad Effects Through Granting Easy Terms to Inexperienced Operators with Insufficient Capital

"The enormous, insatiable demands by the Government for all kinds of lithographic products in prosecuting the war have resulted in a tremendous expansion of lithographic capacity and output. The ultimate effect will be to bring a large number of workers into the field who were non-existent two years ago. Not only did the Government establish litho plants in various units of the army, the navy, naval training centers, and numerous army bases, but equipment has been concentrated in almost every large city where the military headquarters are located. The Government has even gone to the extent of establishing lithographic schools where thousands of men have been trained to do the work required of a craftsman in this industry. It may be stated conservatively that many of those men, when discharged from the army or navy, will look for a future in the lithographic industry.

"Now, the question might arise, if these men want to go into business even on a modest scale, where are they to obtain the capital? Here is the answer in part: It is known that the Government is planning to give every man discharged from the service a bonus of some kind. This bonus will be, let us assume, between fifteen hundred and two thousand dollars. You may take it for granted that a good many of these fellows with some experience in Government plants—even those who were craftsmen before they were inducted—are planning to go into business with the money the Government gives them. You can almost hear some of them saying: 'Believe me, when I get out of this man's army I'm going to take my bonus and go back to my home town and buy me one of these babies so that I can start in the litho business.'"

This is not a pretty picture but I believe we should face this situation realistically and lay plans to offset some of the ill effects that are bound to result if we just sit back and hope that everything will turn out all right in the end.

Setting Up a Yardstick of Fair Trade Practices and Sound Credit Terms

"It is certainly a fact that the equipment industry and the lithographic industry are mutually dependent. What affects one adversely will affect the other just as adversely. Surely the equipment manufacturers and the sellers of second-hand presses have no intention of doing anything deliberately that would interfere with the continuous prosperity of our industry, for it is to their foremost interests that the industry be healthy and prosperous, that those in it should be able to purchase their product, and that they should be able to meet promptly their financial obligations. And this brings me to the question of how much minimum down payment an equipment manufacturer should accept and how long the terms of subsequent payments should be. Certainly the minimum down payment should be at least 25%. Furthermore, the buyer should not undertake the obligation of purchasing equipment unless he has ample working capital to safeguard his investment.

"Another point is that of the time allowed to complete the payments on the equipment purchased. On this subject there may be differences of opinion, but some yardstick should be established so that all purchasers may enjoy equality o credit conditions. In my opinion, 24 months seems to be a generous time allowance, although this is a matter that could easily be arranged to the satisfaction of all parties concerned.

Two-Part Plan To Insure Healthy Industry

Having discussed the present and anticipated condition of the offset-lith industry immediately in the post-war period, Mr. Soderstrom then proposed a two-part plan to insure a healthy condition in the industry.

The first part of the plan would be to conduct a survey to determine a number of factors essential to the industry to protect the potential buyer of equipment from making costly mistakes. The information compiled as the result of the survey should be authoritative and should

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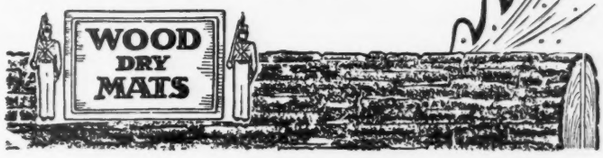

be compiled from unquestionable sources so that it can be utilized by equipment manufacturers and second-hand dealers when negotiating with purchasers.

Among the items to be contained in the compilation would be (1) Brief description of the lithographic process; (2) Budget of cost for setting up small, medium and large plants; (3) Type of competition in the industry; (4) Payroll necessary to carry on a plant; (5) Required floor space to house plant; (6) Budget for operating for one year and approximation of amount of business necessary to cover budget; (7) Statement regarding availability of competent workmen; (8) Other information concerning certain problems.

Industry-Wide Co-operation

Mr. Soderstrom suggested that the photo-lithographers initiate the activity by appointing a committee from their association to look into the various angles involved in the problem. The committee will bring in a factual report with recommendations.

The same approach to the problem should be made by every other trade association within the entire Graphic Arts Industry through a committee from each group. The various committees would then be combined into one joint committee.

After having coordinated its activities, this joint committee would then be in a position to confer with equipment manufacturers and dealers. Finally, the entire group would be able to present its fact-finding data and recommendations constructively so that the various problems could be worked out to the mutual advantage of all concerned.

Wolff Discusses Litho Equipment and Supplies

John M. Wolff, Jr., Chief of the Lithographic Section, Printing and Publishing Division, WPB, discussed Paper, Ink, Supplies and Equipment in the Light of Governmental Regulations.

The speaker pointed out how the lithographic industry could make the neces-

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sary sacrifices to help win the war. Among the measures suggested are (1) Do not carry idle inventory of the various materials used daily; (2) Eliminate waste or reduce it to the absolute minimum; (3) See that customers are practicing every possible economy in production of their printed matter so as to make maximum use of the available manpower.

He said: "Manpower and paper naturally stand out as the two most perplexing problems. We have been working with the Essential Activities Committee of the War Manpower Commission since January, but have made but little progress because the manpower problem is one that must be solved upon the merits of each individual case and not on a blanket industry-wise basis. The printing and lithographic industry is definitely an essential industry and to prove this, all you have to do is to stop the printing presses and see how soon all war production will come to a halt.

"Many months ago we began advocating concentration or consolidation of production in as few plants as possible in order to make the best possible use of the available manpower and we still think this to be sound advice. No one will deny the fact that two plants operating at only 50% capacity because of lack of manpower can certainly do a better job by combining their efforts as a single unit in the one plant best equipped to do the combined job. So much for manpower.

"Paper which next to manpower is the life-blood of our industry is becoming more critical day by day and unless we can get supply and demand in balance—and do it right now—we are apt to be faced with the problem of handling paper on a priority basis. The last report which I saw on the production of printing paper showed that only in 8 weeks during the first 26 weeks did the supply exceed the demand in the production of Printing Papers. You can readily see that if this condition is not remedied, it is only a question of time before we are faced with an almost impossible situation."

Mr. Wolff presented a detailed discussion of important WPB orders affecting the lithographic industry, among which were the revised order M-241 and the recently amended Paper Order L-120 governing the standardization and simplification of paper and paperboard.

Plant Control Methods

Joseph E. Machell, Sr., of Stecher-Traung Lithograph Co., Rochester, N. Y., discussed standard methods for pressroom operation. At the present time, these methods are particularly important for economy of production and from a conservation viewpoint. He asked his audience if its supervising department is capable of assuming a press job and proving itself as capable in operation as the men which it supervises. He also asked if the executives maintained standard methods of makeready, hand-long paper and control of inks, varnishes, driers and their use.

He advocated standardizing instructions to newly-acquired help with respect to oiling machines and washing-up of presses, maintenance of water buckets, care of sponges, rags, waste paper and all materials involved in the operation of an offset press.

In discussing the offset press itself he suggested double-checking the grippers periodically.

He said: "We have a standard method of checking all parts pertaining to the gripper shaft, including the gripper and springs. Probably you have had experience with a job that went out of register during the running of the first color and was not discovered until the second color was lithographed. How long since you have checked cylinders, the bearings and side motion for wear?

"Have you taken all of the packing off the cylinders and measured the openings between the blanket and plate cylinders with the pressure on?

"Find out if your men haven't developed the idea of overpacking the cylinder simply because there might be a loose bearing which was not discovered. The rollers and the entire inker should be thoroughly checked every few weeks. Rollers are costly and shut-downs just as costly when a few minutes of inspection time would have averted these things.

"We check the pressure between the cylinders accurately every few weeks and all pressures are generally a standard operation. Allowances are made for certain inaccuracies in blankets or the type of job and the paper being used. Nevertheless, we always know positively just exactly the way each cylinder in the entire press is adjusted and the amount of packing placed on it.

"Have you checked the press itself to see that it is level on the floor. After being set up, it can settle down and become out of line.

"I would like very much to show you some samples of overpacking cylinders but most of you know those conditions equally as well as I do but I mention the fact only because I think a standard inspection set-up should be continued or most assuredly put into action now if you are not already doing so."

"I sincerely hope in the years after the war that the firm who supply our machines and materials will sponsor a research program of the problems we have had for many years, in an endeavor to eliminate them before entire plants are revamped to fit conditions at that time.

"If a certain material has been giving trouble for years, why should we con-

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tinue to build that trouble into our lithographic machinery? If rollers, blankets, inks and varnishes and paper give all of us the same trouble and create the same problems, why should they not be changed or eliminated? A closer cooperation between the suppliers of lithographic materials and equipment and the lithographic industry would go a long ways in eliminating a great many of these troubles.

"Do not expect changes to be made if you are careless about handling materials and equipment, such as allowing your superintendent, foreman or the pressmen to do anything they want to with both materials and equipment. Also include the plate maker. The variation in plate-graining and other photo operations surely can make bad conditions in the pressroom, especially when the pressman does not know from day to day what kind of a grained plate he is going to get.

"We must build all of our material and its uses around the equipment that we have available and the type of job we are doing. This necessitates the study of the paper for the particular job and the type of ink to be used for the standard set-up so that these can be used without a complete revamping of a given program. Should you have this set-up in operation, I am sure that when trouble does come your supplier will be better able to recognize the trouble and will be better able to help you quickly."

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Northwest Conference

(Continued from Page 16)

One of the most difficult manpower problems, the speaker said, is in the lumbering and pulpwood cutting industry. With manpower for these jobs running as much as 40 per cent below normal, he said an effort will be made to shift men from Minnesota's mines and harvest fields to the woods for the winter.

Afternoon Meeting

FOLLOWING Mr. Rarig's talk, the delegates moved to their luncheon at which prominent visitors, including many from considerable distances, were introduced. After luncheon the delegates went back to another general assembly at which Leon Link, consultant for the newspaper section, printing and publishing division of the War Production board, was the principal speaker.

Mr. Link emphasized the tremendous amount of war materials manufactured in America for use of American fighting forces and their allies. He declared that much of the same kind of materials used to manufacture the tools of war are also the same kinds of material which are used by the newspaper industry and that the newspapers must conserve their materials since they can get them only after the military gets what it needs. He urged newspapers to make their plans now and put them into operation speedily to conserve as much as possible on paper in order to relieve themselves of more trouble in the future. Particularly, he mentioned (1) Shortage of manpower in the Canadian woods; (2) The use of wood pulp in the manufacture of munitions and other important war supplies, and (3) The fact that many newspaper publishers have hoped the other fellow would make the saving while they continued business as usual, and in many cases, better than usual. He also urged that newspapers be vigilant in their care of electrical and mechanical equipment of their plants.

Hudson Presents Suggestions for Newsprint Conservation

Fred C. Hudson of the Newspaper Engineering Dept., International Printing Pressmen's and Assistants' Union, presented a paper on the seriousness of the newsprint situation. He offered a number of conservation ideas. Among these were (1) Elimination of returns, (2) Half-column cuts of columnists and feature writers, (3) Reducing size of slug on body type, (4) Reducing white margins on color comic and color magazine sections, (5) Elimination or reduction of 8 col. streamers across page 1, (6) Reducing heads and confining subheads to two lines, (7) Eliminate 10 and 12 pt. leads on page 1 stories, (8) Eliminate hand leading of stories on page 1.

He submitted the accompanying chart which will be helpful in determining the actual copies that should be secured from newsprint rolls.

Mr. Hudson stated it should be definitely understood that the figures in the chart accompanying this report repre-

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THEORETICAL WEIGHT AND LENGTH OF WEB OF NEWSPRINT ROLLS

Based on: Basis Weight 32 lbs. Thickness of sheet 0.0032 in.

	Diam. 36 in.	Diam. 37 in.	Diam. 38 in.	Diam. 39 in.	Diam. 40 in.
66½ in. Weight of Roll	1547	1636	1726	1819	1915
67 in. Weight of Roll	1559	1648	1739	1833	1930
67½ in. Weight of Roll	1571	1660	1752	1847	1944
68 in. Weight of Roll	1582	1673	1765	1860	1958
Number of 8-Page Papers:					
Cut-off 21 ½in.	14611	15446	16300	17180	18084
Cut-off 22¾ in.	13809	14598	15405	16236	17090
Cut-off 23⅜ in.	13332	14094	14874	15676	16500
Lineal Feet in Roll	26179	27675	29205	30780	32400

sent calculations based on positive conditions. These conditions vary considerably in actual newsprint production. The weight of rolls, as well as the length of web, are affected by basis weight, thickness of the sheet, moisture content, tightness of winding, etc. Consequently, all tables of this nature should be considered as approximate values only. The weights of rolls given are for newsprint only and do not include the core.

"Within recent months," said Mr. Hudson, "a large number of newspapers with a makeup of 8 columns, 12 picas have adopted smaller width rolls. There is no reason why a 4-plate-wide machine cannot go to 66 in. width, or a 2-plate-wide machine to 33¼ in. and 33½ in. widths. Two or three papers that we know of have reduced to 33 in. Of course, the first step is the adoption of 3- or 4-point rules and accurately determining the amount of shrinkage necessary to use the narrower width. In some cases, on 4-plate-wide machines it may be necessary to turn down the center clips and rings or change the bevel on the clips and rings."

The speaker asserted that the IPP&A Union is opposed, as a basis of war economy to reducing the weight of newsprint. Over a period of many years manufacturers and suppliers in cooperation with the Union membership has endeavored to eliminate strike-through, show-through and transparency and an outstanding job has been done. A reduction in the basis weight of newsprint will return costly waste to the industry. It is not possible, said he, for a lighter-weight paper to stand up under the same pressure attendant to the operation of a newspaper printing press as is now effective with a better sheet of newsprint.

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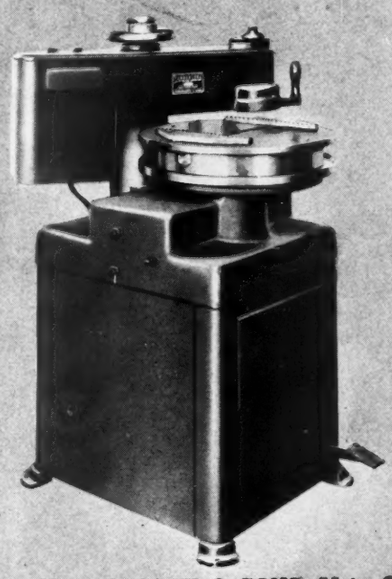
PREPRINT



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A Free Press Is Our Gyrocompass

Our Ship of State plows on and on through the stormy Sea of Time. Sometimes hurricane and mountainous waves threaten. Then "the people," Captain of our Ship, alters the course slightly, but only for a time. After each emergency the course toward greater freedom is resumed. • Occasionally strong opinioned patriots among us, thinking their sights of the stars more accurate, feel they should captain the ship. That they can find a shorter course. Other equally patriotic men, certain we are heading for dangerous reefs, want to take a slower route, or even to drop anchor and hold our position. • But our American form of government *by the people* has already proved more successful in reaching high living standards than has any other kind of rule. • And so long as our free press continues to air all angles of opinion, and keep all the people fully informed and educated, the composite intelligence of the people will *keep* our Ship of State on a safe course. • Here in America the gyrocompass that corrects magnetic errors is *Freedom of the Press*... valuable instrument of a sovereign people in sailing our Ship of State toward the better life.

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